PART IV FEASIBLE MITIGATION MEASURES

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Part IV Otay Ranch Feasible Mitigation Measures

The following mitigation measures are required to implement the Otay Ranch Subregional Plan adopted by the County of San Diego Board of Supervisors on October 28, 1993. Part IV presents, in paragraph format, what is contained in tabular form in the Otay Ranch Mitigation Monitoring Program. In some cases, mitigation measures have been summarized and additional detail may be found in the CEQA Findings of Fact for the Otay Ranch Program Environmental Impact Report (EIR) (SCH #89010154, County #89-14-98). Therefore, the actual CEQA Findings of Fact shall prevail where differences occur.

Land Use (FEIR Section 4.9.2.2; cf. Section 3.1.3)

1a. The Specific Plans developed for the areas of the Otay Valley Parcel adjacent to EastLake, industrial lands, the Otay Landfill, the Nelson and Sloan Quarry, the Rock Mountain Quarry, and the Daley Quarry shall contain landscaping, grading and buffering standards (including any recommendations under Air Quality, Noise or Risk of Upset) to prevent land use interface impacts; or

1b. In the event that these standards are not ensured, residential development adjacent to the Otay Landfill and its required buffer shall be scheduled so as not to occur until the landfill has been closed in 1999; and

2. Project plans shall be submitted to the FAA for review to determine if incompatibilities exist between the San Diego Sports Air Center and the project. If incompatibilities are found, then the Specific Plan shall be designed to avoid such interface impacts or the phasing plan shall be revised to allow use of the Sports Center until its option expires.

3. Development adjacent to the Daley Quarry, the Nelson and Sloan Quarry, and the Rock Mountain Quarry shall occur in accordance with the following measures:

3a. Residential development within 9,300 feet of the quarries shall be staged such that construction shall not take place unless the quarries have been mined-out and mining operations have ceased or noise impacts are mitigated as demonstrated by site-specific studies; or

3b. The project developer shall prove through a site-specific noise study that measures necessary to achieve exterior and interior noise standards are incorporated into project designs to ensure that significant noise impacts would not occur while the quarries are in operation.

4a. SPA plans for areas having land use interface impacts on the Jamul Country Town, Proctor Valley, and the northern and southern shores of Lower Otay Lake shall contain policy language explicitly setting forth standards for landscaping, grading, and buffering to prevent land use interface impacts between adjacent internal land uses, especially between single-family and multi-family residential and between residential and non-residential uses; and

4b. Residential lots contiguous to Jamul in the Proctor Valley parcel shall not be smaller than 1-acre in size.

4c. Buffer and/or transition techniques regarding transitions between villages within and outside of the project are included in the SRP.

5. If the existing FAA VORTAC facility is not relocated, the Subregional Plan map shall be revised to indicate this land use. In addition, the Specific Plan shall set forth standards for landscaping, grading, and buffering to prevent land use interface impacts.

6. The applicant shall implement the development criteria in the RMP to protect resources located outside the management preserve.

Landform Alteration/Aesthetics (FEIR Section 4.9.3.2; cf. Section 3.2.3)

1. The Subregional Plan contains specific landform alteration standards to protect sensitive landforms. The applicant shall implement, at a minimum, the following measures:

   - Roadways shall be designed to follow the natural contours of hillsides and minimize visibility of road cuts and manufactured slopes.
   - Excessive use of manufactured slopes in the Otay River Valley, Jamul and San Ysidro Mountains, and the area around Otay Lakes shall not be permitted.
   - Natural buffering shall be provided between development and significant landforms, including the Jamul and San Ysidro Mountains.
   - Variable slope ratios not exceeding 2:1 shall be utilized when developing grading plans.
   - 83% of the steep slopes (greater than 25%) shall be preserved.

2. Grading to correct mining disturbance shall be limited to:

- Clearing previously disturbed areas and minor areas incidental to the previously disturbed areas.
- Capping of areas to provide ground for establishing new plant material or construction of approved uses (i.e., staging areas, recreation centers, interpretive centers, etc.).
- Over-excavation of areas for re-compaction, creation of habitat and creation of wetland areas.
- Grading to create flood control devices including over-excavation and creation of berms to contain floods.
- All grading shall result in new landforms, which emulate existing landforms found within the river valley as of Project approval. These new features shall include irregular slopes of variable pitch.

3. All grading plans submitted will be prepared by a certified engineer and evaluated by the planning and engineering departments of the appropriate jurisdiction. Development will be constructed in accordance with those plans as well as the grading policies of the Subregional Plan.

4. Future analysis shall include engineering cross-sections depicting existing and proposed topography or photo-documentation illustrating proposed topographic and design features. Cut/fill slopes in excess of 15 feet in height shall be identified. Special attention shall be placed on grading and design of the following features of the project:

   - Size, location, and setbacks of the resort building above Lower Otay Lake.
   - Grading and development of residential areas within the San Ysidro Mountains Parcel in the higher elevations in the vicinity of Lower Otay Lake.
   - Height and length of manufactured slopes along Telegraph Canyon Road, Otay Lakes Road, Proctor Valley Road, and Otay Valley Road.
   - Development and grading along major ridgelines, such as within the San Ysidro and Jamul Mountain areas, and adjacent to all natural open space areas.
   - Setback and building heights of industrial development south of Otay River Valley.
   - Location and visibility of new public tails through open space in proximity to existing and future development.

- Placement of clustered development or stepped (split-level) building pads in hillside regions, If possible, to minimize landscape disturbance and retain ridgelines.

5. The Subregional Plan contains design guidelines pertaining to future streetscapes, buildings, and villages to enhance the visual appeal of development and prevent contracts in site character. The design guidelines include the following:

   - View corridors shall be integrated at the terminus or periodically along the length of streets paralleling or intersecting undeveloped open space.
   - Walls, including acoustical barriers, shall be integrated into the architectural theme and scale of the villages.
   - Landscape themes shall be used to define village character and blend with adjacent existing development.
   - Natural and native plantings shall be integrated into revegetation plans for manufactured slopes adjacent to open space areas.
   - Scale and architectural treatments (i.e., rooflines, building materials) of all residential and non-residential village buildings shall be diverse and yet compatible.
   - Signage shall be controlled and designed to fit in the pedestrian environment.
   - Buffer techniques shall be developed to address transitions between villages and incompatible land uses to minimize visual impacts.
   - Architectural colors for development adjacent to open space areas shall incorporate natural tones and shades.
   - Overhead and night lighting shall be in accordance with the County's Dark Sky Ordinance in the Proctor Valley and San Ysidro Mountains parcels. Street fixtures shall utilize low glare bulbs (i.e., amber light) and be placed, only as necessary, near key intersections for security purposes in accordance with County policy.

6. Specific Plans and all implementing documents shall require design review for all building and site plans to ensure compatible architectural styles, building materials, building proportions, landscaping, streetscape, and signage throughout each village.

7. To mitigate impacts on visual resources associated with the resort to be located on the mesa north of Lower Otay Lake and all other development surrounding the eastern and southern sides of the lake, site plan and building schematics shall be reviewed by the appropriate jurisdiction to ensure the following measures are incorporated into the design:

   - Buildings shall be visually compatible, in terms of height, scale and bulk, and shall be set back from the edge of the mesa and composed of low-rise structures, no more than three stories in height with an occasional four-story building.
   - Contour grading shall be used to transition graded slopes into the natural topography of surrounding hillsides.
   - Manufactured slopes shall be revegetated upon completion of grading activities.
   - Color schemes shall be limited to natural colors that blend with the existing environment and surrounding hillsides.
   - Buildings shall maximize the use of non-reflective/ non-glare surfaces.

8. To mitigate potential visual impacts as a result of the university site, the following design guidelines shall be required of a private university and strongly encouraged to be followed by a public university. (Because development of a public university is within the jurisdiction of another agency, these guidelines cannot be mandated.)

   - Building heights must be gradually reduced toward the Lower Otay Lake shoreline.
   - Setbacks must be incorporated into site plans to prevent the university from dominating the views to the lake.
   - Non-reflective/non-glare building material must be integrated into the building whenever possible.
   - Design must be compatible with the architectural, landscape and building treatments of the Olympic Training Center and other adjacent developments.
   - Clustering of buildings is required.

9. To mitigate visual and policy impacts from realignment of Otay Lakes Road, a scenic roadway, a visual resource evaluation shall be conducted by the Applicant once the actual roadway alignment and surrounding development

has been determined to identify key view corridors that would be available to travelers. Significant views of Lower Otay Lake and the San Ysidro foothills and mountains shall be preserved by a combination of the following:

- Heights of buildings adjacent to the southern edge of the roadway shall be limited to heights, which enable views of the lake and surrounding hillsides, or site planning adjacent to the southern edge of the roadway shall enable view corridors of the lake and surrounding hillsides.
- Viewing areas shall be established along the roadway corridor to allow travelers to stop and enjoy the view above the lake.
- The abandoned alignment shall be rehabilitated and open for pedestrian and bicycle viewing access. Rest areas and vistas shall be incorporated into the rehabilitated walkway or promenade.

Biological Resources (FEIR Section 4.9.4.2; cf. Section 4.2.4.2)

1. The SRP incorporates the policies and standards of the project's RMP and includes an open space system as called for in the RMP. The Specific Plans will need to be consistent with the RMP.

2. Specific mitigation regarding on-site preservation standards, additional sensitive resource studies, control of water runoff, implementation of a Fire Management Plan, and habitat restoration are listed in Exhibit A of this program. Applicable Specific Plans shall meet the required preservation standards and include the required studies and plans, as well as detailed restoration plans, maintenance and monitoring programs, where necessary.

3. Specific mitigation for impacts to regional corridors and important local wildlife corridors should follow detailed recommendations of the Wildlife Corridor Study.

Cultural Resources (FEIR Section 4.9.5.4; cf. Section 3.4.3)

1. **Prehistoric Resources:** A programmatic mitigation plan for prehistoric resources shall be prepared to include the following as described in more detail in the RMP.

   Stage 1 - In conjunction with the first Specific Plan application within each parcel (Otay Valley, Proctor Valley and San Ysidro Mountains), a comprehensive cultural resources study to assess cultural resources throughout that parcel shall be performed. This report shall be a means of gaining comparative information to develop a

specific program for mitigation and resource management. This would include a report to be prepared by a qualified consultant to be reviewed and approved by the appropriate jurisdiction on both the survey and testing programs.

Stage 2 - Site importance and boundary testing shall occur for each resource identified within the first Specific Plan based on research design approved by the appropriate jurisdiction, and for a sample of site types within the overall Project. Site testing is required to adequately assess the sites for their importance under CEQA and local guidelines. A sample of site types beyond the Specific Plan area shall be tested as a means of gaining comparative information and to develop a specific program for mitigation and resource management. This requires a report to be prepared by a qualified consultant to be reviewed and approved by the appropriate jurisdiction on both the survey and testing programs.

Stage 3 - For those sites determined to be important resources, alternate means of achieving mitigation can be pursued. In general, these forms of mitigation include:

- **Site Avoidance:** For prehistoric resources, sites with human burials, areas that contain rock art (petroglyphs and pictographs), rock shrines, and other rock or stone architectural features shall be preserved and protected. Any impact to these resources shall be avoided. Additionally, sites that may contain particular religious or sacred importance to Native American people will require avoidance and protection measures to ensure that the sites are not destroyed or degraded. For historic resources, intact standing structures and buildings that are found to be significant as determined by the appropriate jurisdiction shall be preserved in place, and to the extent possible, subjected to minor alterations in the immediate setting and character. In some cases (as determined by the appropriate jurisdiction), architectural features such as walls, flumes, or other permanent elements of the built and altered environment may require in place preservation and protection.

  For resources requiring avoidance it must be clearly demonstrated that a site will, In fact, be avoided by all Project activities such that no possible adverse impacts, direct or indirect, could occur. The determination as to adequacy is made by the lead agency as part of the environmental review performed on each Specific Plan. Specific avoidance measures may include either the location of the sites in currently proposed open space areas, or in particular instances, even more specific

Project design to avoid the resource by maintaining it in a dedicated open space.

- **Site Avoidance/Preservation:** Design measures can include capping of sites with sterile fill soil and/or placing restrictions on access and usage of individual parcels as well as public parks and public open spaces. A preservation plan must be prepared for those sites that are determined to be significant as defined in Appendix K of the CEQA Guidelines.

- **Data Recovery:** For those sites that are found to be important resources and for which avoidance and preservation is not feasible or appropriate, a data recovery plan shall be prepared. The plan, while it may be part of a much larger program for several sites under study, shall be site specific. The plan shall, at a minimum, include the following:

  " A statement of why data recovery is appropriate as a mitigating measure.

  " A research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site. The research plan may deviate from the suggested research questions provided by the County of San Diego but if this is the case, the rationale for rejecting certain research questions should be provided and more relevant questions posed.

  " A statement of the types and kinds of data that can reasonably be expected to exist at the site (based on the Phase 1 testing) and how these data will be used to answer important research questions.

  " A step-by-step discussion of field and laboratory methods to be employed. This will include the sampling strategy, methods of excavation and recovery of materials for special studies, and laboratory techniques for the analysis and interpretation of the materials.

  " All artifacts shall become public property. Provisions for curation and storage of the artifacts, notes, and photographs in the interpretative center shall be stated. A memorandum of agreement shall be prepared to formalize the curation policy.

2. Additionally, provision for the on-site presentation and interpretation of the results of the archaeological studies at an interpretive center or museum shall be required. This shall be accomplished through adaptive reuse of one of the historic structures within the Project or through

construction of a building within one of the parks or community centers.

3. For historic resources, the mitigation is essentially the same as for prehistoric resources discussed above (see #1 and 2 above). The same steps and stages should be followed although, as described in the RMP, archival research and historical documentation shall be used to augment field-testing programs. Mitigation of impacts to historic resources through preservation may be more feasible for historic sites than for prehistoric sites because they generally comprise a smaller area and can often be synthesized into a development plan. Adaptive re-use of standing historic structures shall be required where feasible, and preservation plans to ensure long-term viability of the structures will be required.

   If on-site preservation is not possible, recovery of all possible information, both surface and subsurface, is the only other acceptable alternative. The data recovery program will be integrated with a corresponding archival research program to fully assess the significance of the material found on the sites. By creating a complementary research program that fully incorporates the archival material with the field results, many important research questions can be addressed.

4. For prehistoric/historic resources, mitigation is essentially the same as described above. The same steps and stages should be followed although, as described in the RMP, archival research and historical documentation may be used to augment field-testing programs.

   If on-site preservation is not possible, recovery of a representative amount or sample of information, both surface and subsurface, is the only other acceptable alternative. For historic components, the data recovery program shall be integrated with a corresponding archival research program to fully assess the significance of the material found on the sites. By creating a complementary research program that fully incorporates the archival material with the field results, many important research questions can be addressed.

Geology and Soils (FEIR Section 4.9.6.2; cf. Section 3.5.3)

1. At the tentative map level, site-specific geotechnical studies based on proposed development plans shall be conducted prior to construction to specifically evaluate soil conditions and characteristics, areas of potential slope instability, landslides, faults, liquefaction, and rip-ability characteristics. The studies shall be conducted by a qualified geotechnical engineer for the Project Applicant

and shall meet the engineering standards of the appropriate jurisdiction.

- Impacts related to slope instability shall be mitigated by site-specific geotechnical static and pseudo-static slope stability analyses conducted prior to submittal of tentative maps that will provide input relative to appropriate slope design alternatives. These mitigation measures shall include benching, adjusting heights and inclinations of proposed cut and fill slopes, retaining walls, slope protection, and/or erosion control devices.

- Significant impacts due to ground rupture shall be avoided by not building directly over the fault trace. A site-specific geotechnical study would be necessary at the tentative map level to identify specific fault locations and delineate fault setback zones (as necessary) in accordance with guidelines of the appropriate jurisdiction.

- Potential damage from seismic ground shaking shall be mitigated by adhering to the Uniform Building Code, state-of-the-art seismic design parameters of the Structural Engineering Association of California (SEAOC), and applicable local building codes. Such seismic design suggests assuming a design ground acceleration that is equal to 2/3 of the maximum anticipated bedrock acceleration. The design acceleration for the Otay Ranch area is 0.18g. The seismic design parameters, provided as a result of a site-specific geotechnical study, shall be utilized by a qualified structural engineer in the design and construction of the Project.

- A qualified geotechnical engineering consultant shall perform an investigation of the site to evaluate the liquefaction potential upon submittal of tentative maps. Where potential for liquefaction is determined to be moderate to high (such as in major tributary canyon bottoms), mitigation measures shall include removal and re-compaction of loose, unconsolidated soils, vibrofloatation, or dynamic compaction techniques.

- Landslide impacts shall be mitigated based upon site-specific geotechnical studies on all tentative maps submitted for the Project to delineate the limits of slides (i.e., head and toe). Landslides, which may potentially impact developed areas shall be completely removed or buttressed during site grading. However, basal erosion of the slopes shall be avoided. Over-saturation and subsequent loading of the soils and sediments (from lawns, etc.) shall be avoided.

2. At the tentative map level, on-site soils shall be investigated by a qualified geotechnical consultant to evaluate the potential for significant impacts due to erosion and expansion. Appropriate mitigation measures, such as those provided below, shall be incorporated into the Project design.

   - **Erosion:** Erosion shall be minimized through erosion control measures. During the construction phase, interim measures such as covering exposed graded slopes with visqueen and sandbagging at slope toes shall be implemented. During the operational phase, measures including maintenance of drought tolerant vegetative cover and vegetated buffer zones and appropriate drainage control devices shall be employed.

   - **Expansive Soils:** Problems related to expansive (shrink-swell) soils shall be mitigated by selective grading and specially designed foundations in compliance with the Uniform Building Code (UBC).

Paleontological Resources (FEIR Section 4.9.7.2; cf. Section 3.6.3)

1. Prior to issuance of development permits, the Applicant shall confirm to the City of Chula Vista or the County of San Diego that a qualified paleontologist has been retained to carry out an appropriate mitigation program. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) A pre-grade meeting shall be held among the paleontologist and the grading and excavation contractors.

2a. A paleontological monitor shall be on-site at all times during the original cutting of previously undisturbed sediments of highly sensitive geologic formations (i.e., San Diego, Otay, and Sweetwater formations) to inspect cuts for contained fossils. (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.) The paleontological monitor shall work under the direction of a qualified paleontologist. The monitor shall be on-site on at least a half-time basis during the original cutting of previously undisturbed sediments of moderately sensitive geologic formations (i.e., unnamed river terrace deposits and the Mission Valley Formation) to inspect cuts for contained fossils.

2b. The monitor shall be on-site on at least a quarter-time basis during the original cutting of previously undisturbed sediments of low sensitivity geologic formations (i.e., Lindavista Formation and Santiago Peak Volcanics

[metasedimentary portion only]) to inspect cuts for contained fossils. He or she shall periodically (every several weeks) inspect original cuts in deposits with an unknown resource sensitivity (i.e., Quarternary alluvium).

2c. In the event that fossils are discovered in unknown, low, or moderately sensitive formations, the Planning Department of the appropriate jurisdiction shall increase the per-day field monitoring time. Conversely, if fossils are not discovered, the monitoring, at the discretion of the Planning Department, shall be reduced. A paleontological monitor is not needed during grading of rocks with no resource sensitivity (i.e., Santiago Peak Volcanics, metavolcanic portion).

3. When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete whale skeleton) may require an extended salvage time. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains such as isolated mammal teeth, it may be necessary in certain instances and at the discretion of the Planning Department of the appropriate jurisdiction to set up a screen-washing operation on the site.

4. Prepared fossils along with copies of all pertinent field notes, photos, and maps shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.

5. Impacts to areas not planned for mass excavation operations (i.e., open space and parklands) shall be mitigated by setting aside certain portions of these areas as paleontological/geological preserves.

Agricultural Resources (FEIR Section 4.9.8.2)

1. An Agricultural Plan indicating the type of agricultural activity allowed as an interim use and buffering guidelines to prevent land use interface impacts shall be prepared. Buffering measures shall Include:

    - A 200-foot distance between property boundaries and agricultural operations.

- If permitted interim agricultural uses require the use of pesticide, then limits shall be set as to the time of day and the type of pesticide application that may occur.
- Use of vegetation along the field edges adjacent to development that can be used for shielding.
- Notification of adjacent property owners of potential pesticide applications.
- Use of fencing.

2. Landscaping and buffering guidelines shall be developed for the areas planned adjacent to continuing agricultural uses (off-site).

3. In the Otay Valley Parcel near the proposed composting facilities and Bird Ranch where prime soils are located, a demonstration agricultural area shall be set aside. Schools within the Otay Ranch property shall be allowed to promote educational activities in regard to agriculture through the use of the agricultural demonstration area. The criteria to establish the agricultural demonstration activities are described in the Final EIR.

4. Agricultural activity and the keeping of animals shall be allowed within the large, low density lots planned along the northern edge of the Proctor Valley Parcel as allowed within the Jamul/Dulzura Subregional Plan. Development plans for this area shall contain landscaping and buffering guidelines to prevent nuisance impacts related to noise and odor from occurring between adjacent internal residential uses.

Mineral Resources (FEIR Section 4.9.9.2)

1. Compatible land uses shall be developed near the locations of future mineral extraction activities. If feasible, Project phasing shall allow for the extraction of mineral resources at Rock Mountain, the Nelson and Sloan Quarry and the Daley Quarry before conflicting development occurs.

Water Resources and Water Quality (FEIR Section 4.9.10.2; cf. Section 3.9.3)

1. For the first Specific Plan, a comprehensive drainage infrastructure plan shall be prepared for the drainage basin as defined by the appropriate jurisdiction. The specific master drainage plans shall include drainage infrastructure, staging/development detail, timing, financing, and responsibility for drainage impacts. The master drainage plans shall comply with Title 44 CFR in regards to development on floodplains, with County floodway and floodplain fringe wetland protection

ordinances, or with Chula Vista ordinances. Any channel improvements on a watershed greater than one square mile shall comply with Section 404 of the Clean Water Act.

2. Detailed hydrologic and hydraulic studies shall be prepared by a qualified hydrologist to demonstrate that the project design meet Title 44 of the Federal Regulations and the County of San Diego and City of Chula Vista floodplain encroachment and engineering standards contained in the appropriate ordinances of each jurisdiction. The recommendations of the studies shall be implemented. The studies shall include:

   - A detailed site-specific floodplain/floodway width study shall be completed at the tentative map stage to ensure that encroachment of the floodway is avoided. The floodplain fringe may be developed in certain areas if a retaining structure (e.g., dike, etc.) is built at the floodway boundary. Under the supervision of the Public Works Department of the appropriate agency, the Applicant shall conduct a detailed design study for each bridge and culvert. All proposed bridges and culverts shall be designed and constructed for the 100-year flood without causing backwater effects or hydraulic conditions that would lead to significant scouring or erosion of embankments.

3. Development shall not significantly increase existing 100-year flood flows above natural conditions unless downstream structures can accommodate the increase in total discharge, peak discharge and increased velocities, or detention basins shall be constructed to prevent adverse impacts.

4. Detailed hydrologic and hydraulic studies shall be prepared by a qualified hydrologist to discuss erosion and sedimentation associated with project development and specifically how these impacts shall be avoided through design features in accordance with Title 44 of the Federal Regulations and County of San Diego and City of Chula Vista erosion control standards. The recommendations of the studies shall be implemented and are expected to include:

   - Protection of all embankments and slopes within the floodplain to prevent erosion.

   - Energy dissipation devices at the confluences of the storm drainage system and the natural channels to prevent erosion.

   - Siltation basins at locations where the runoff velocity drastically decreases.

5. Plans provided in the Urban Runoff/Reservoir Study prepared by the Specific Plan applicant, including a dry weather collection system, a water monitoring program and buffer zones around Otay Lakes, shall be implemented.

6. The project shall comply with all applicable urban runoff and storm water discharge regulations and all conditions of its NPDES permits, any regulations adopted by the City of Chula Vista or County of San Diego pursuant thereto. The City of Chula Vista and County of San Diego have a municipal permit for the State RWQCB for storm water discharge. In order to be covered under a Municipal Permit, Order No. 90-42, NPDES No. CA0108758, the developed areas shall be required to mitigate impacts to storm water quality. Further measures that are more strict than the permit standards, however, shall be imposed if necessary to reduce the impact to below a level of significance after appropriate site-specific studies at the Specific Plan level including preparation and implementation of a storm water pollution prevention plan.

6b. Detailed storm water quality studies shall be conducted by a qualified hydrologic engineer to develop appropriate mitigation to protect the quality of both the Otay reservoirs and the remaining waterways. These studies shall demonstrate that no degradation of water quality will occur.

7. Unlined natural channels and unlined siltation basins shall be used whenever possible. A study shall be prepared by a qualified hydrogeologic engineer to address the issues of manmade recharge system, to identify appropriate mitigation for possible aquifer recharge impacts and to demonstrate that the applicable standards on aquifer recharge shall be achieved.

8. An Urban Runoff Master Plan for Otay Lakes shall be prepared by a qualified hydrologic engineer to demonstrate that the existing water quality at the outflow of the water filtration plant will, at a minimum, be maintained.

9. Detailed water quality analysis, including estimations of the amounts of urban runoff loading for metals, herbicides, pesticides, fuels and surfactants, will be conducted at the Specific Plan level and appropriate mitigation measures developed.

10. Best management practices (BMPs) shall be designated and implemented at the Specific Plan level.

11. A Watershed Impact and Protection Report shall be developed and implemented for each drainage basin.

12. The development of permanent structures for human habitation or as a place of work shall not be permitted in a floodway. Use permitted in a floodway shall be limited to agricultural, recreational, and other such low-intensity uses provided, however, that no use shall be permitted which will substantially harm the environmental values of a particular floodway area. Mineral resources extraction shall be permitted subject to any necessary approvals, provided that mitigation measures are required which produce any net gain in the functional wetlands and riparian habitat.

13. Modifications to the floodway shall meet all of the following criteria:

- Concrete or rip-rap flood control channels are allowed only where findings are made that completion of the channel is necessary to protect existing buildings from a current flooding problem. Buildings constructed after the enactment of the Resource Protection Ordinance shall not be the basis for permitting such channels.

- Modification will not unduly accelerate the velocity of water so as to create a condition, which would increase erosion (and related downstream sedimentation) or would be detrimental to the health and safety of persons or property or adversely affect wetlands or riparian habitat.

- In high velocity streams where it is necessary to protect existing housing and other structures to minimize stream scour or avoid an increase in the transport of stream sediment to downstream wetlands and other environmentally sensitive habitat areas, grade control structures and other erosion control techniques, including the use of rip-rap, that are designed to be compatible with the environmental setting of the river, may be permitted. The use of rip-rap shall be allowed only when there is no other less environmentally damaging alternative feasible.

14. All uses permitted by zoning and those that are allowable in the floodway are allowable in the floodplain fringe, when the following criteria are met:

14a. Fill shall be limited to that necessary to elevate the structure above the elevation of the floodway and to permit minimal functional use of the structure (e.g., fill for access ramps and drainage). If fill is placed in the floodplain fringe, the new bank of the stream shall be landscaped to blend with the natural vegetation of the stream and enhance the natural edge of the stream.

14b. Any development below the elevation of the 100-year flood shall be capable of withstanding periodic flooding.

14c. The design of the development shall incorporate the findings and recommendation of a site-specific hydrologic study to assure that the development: (a) will not cause significant adverse water resource impacts related to quality or quantity of flow or increase in peak flow to downstream wetlands, lagoons and other sensitive habitat lands; and (b) neither significantly increases nor contributes to downstream bank erosion and sedimentation of wetlands, lagoons or other sensitive habitat lands.

14d. Lot configuration shall be designed in such a manner as to minimize encroachment into the floodplain. The proposed development shall be set back from the floodway boundary a distance equal to 15% of the floodway width (but not to exceed 100 feet), in order to leave an appropriate buffer area adjacent to the floodway. The setback may be greater if required by paragraph f.

Following review of a site-specific flood analysis, the floodplain setback required by this paragraph may be reduced by the Director of Planning of the appropriate jurisdiction or the applicable hearing body, upon making all of the following findings: (a) Practical difficulties, unnecessary hardship, or results inconsistent with the general purposes of this ordinance would result from application of the setback; and (b) The reduction in setback will not increase flood-flows siltation and/or erosion, or reduce long-term protection of the floodway, to a greater extent than if the required setback were maintained; and (c) The reduction in setback will not have the effect of granting a special privilege not shared by other property in the same vicinity; and (d) The reduction in setback will not be materially detrimental to the public health, safety, or welfare, or injurious to the property or improvement in the vicinity in which the property is located; and (e) The reduction in setback will not be incompatible with the General Plan of the appropriate jurisdiction.

14e. Where appropriate, flowage and/or open space easements shall be used to ensure future development will not occur in the floodplain.

14f. In areas where the Director of Public Works has determined that the potential for erosion or sedimentation in the floodplain is significant, all proposed development shall be set back from the floodway so that it is outside the Erosion/ Sedimentation Hazard Area shown on County/City Floodplain Maps. Development will only be allowed in the Erosion/Sedimentation Hazard Area when the Director of Public Works of the appropriate jurisdiction

approves a special study demonstrating that adequate protection can be achieved in a manner that is compatible with the natural characteristics of the floodplain.

14g. If the subject floodplain fringe land also constitutes wetlands, wetland buffer areas, steep slope lands, sensitive habitat lands or significant prehistoric or historic site lands, the use restrictions herein applicable to such areas shall also apply.

Transportation, Circulation, and Access (FEIR Section 4.9.11.2; cf. Appendix B)

1. A traffic analysis shall be conducted within the study area of the proposed Specific Plan to identify additional transportation mitigation measures for the construction of new roads, bridges and roadway improvements, and shall implement transportation demand/system management programs and/or facilities or other measures necessary to mitigate traffic impacts on circulation element roads. The standard to be achieved requires that the Project avoid reduction in the existing level of service below "C" with the exception that LOS "D" may occur on signalized arterial segments for a period not to exceed a total of two hours per day. If the existing level of service is below "C", mitigation measures to achieve level of service "C" (with the exception that level of service "D" will be allowed on signalized arterial segments for a period not to exceed a total of two hours per day) must be imposed as conditions of approval for the Specific Plan. Internal village streets/roads are not expected to meet these standards. The Applicant shall adhere to the following guidelines:

    - Arterial segment LOS measurements shall be for the average weekday peak hours, excluding seasonal and special circumstance variations.

    - Urban and suburban arterials are defined as surface highways having signal spacing of less than 2 miles with average weekday traffic volumes greater than 10,000 vehicles per day.

    - Arterial segments shall be stratified into three classifications -- Class I, Class II, Class III.

    - The LOS measurement of arterial segments and freeway ramps shall be a growth management consideration in situations where proposed developments have significant impact at interchanges.

    - Circulation improvements shall be implemented prior to anticipated deterioration of LOS below established standards.

- The criteria for calculating arterial LOS and defining arterial lengths and classifications shall follow the procedures detailed in Chapter 11 of the 1985 Highway Capacity Manual (HCM) and shall be confirmed by the City or County Traffic Engineer, as appropriate.

- During the preparation of future Traffic Monitoring Program field surveys, intersections experiencing significant delays will be identified. The information generated by the field surveys will be used to determine possible signal timing changes, geometric and/or traffic operational improvements for the purpose of reducing intersection delay.

- Level of service values for arterial segments shall be based on the Highway Capacity Manual, Special Report 209, 1985.

2. To the extent that Otay Ranch contributes to the need for a facility outside of its boundaries, the Project shall contribute (at the level at which it impacts the facility) to the mitigation of the impact by participating in impact fee programs or other means identified at the Specific Plan or tentative map level.

3. Applicants on the Otay Valley Parcel shall contribute their "fair share" to the capital and operating costs associated with the new transit system. This shall be done through provisions in facility financing plans at the Specific Plan level. Further, benefit assessment districts shall be established to fund new transit routes under MTDB Board Policy No. 40 Non-Transit Funding of Transit Services. (This final requirement cannot be mandated because the Lead Agency cannot mandate MTDB to take this action; because this finding is not within the jurisdiction of the Lead Agency it should be interpreted as a mandate for the Applicant to work with MTDB.)

4. For each Specific Plan, the Applicant shall prepare a detailed analysis of peak hour turning movement volumes and intersection capacity for all major affected intersections as determined by the traffic engineer representing the reviewing jurisdiction or agency. (At a minimum these study area intersections include all intersections with entering volumes in excess of 65,000 vpd under the proposed land use plan.) This analysis will define the necessary mitigation to achieve acceptable peak hour levels of service. If the proposed land use plan has not been evaluated by the SANDAG model, or if the SANDAG model has been substantially modified (i.e., updated land use and/or network assumptions) then updated modeling of the SPA project shall be required to allow the completion of detailed peak hour analyses.

5. The Applicant shall construct as a condition of approval to the Specific Plan, new roads, bridges and roadway improvements, and shall implement transportation demand/system management programs and/or facilities, or other measures necessary to fully mitigate traffic impacts (related to traffic impacts of the Project) on circulation element roads, to avoid reduction in the existing level of service below "C", with the exception that LOS "D" may occur on signalized arterials for a period not to exceed a total of two hours per day.

6. No more than 15,000 dwelling units or 4,000,000 square feet of commercial may be constructed within the Project until funding and construction for LRT is assured. Applicants in the Otay Valley Parcel shall contribute their "fair share" to the funding of these facilities and operating costs.

7. The Applicant shall participate in fair share funding and implementation of the following general mitigation measures:

   - Prepare Transportation Demand Management (TDM) Mitigation Strategies
   - Update General Plans
   - Prepare Transportation Phasing Plan
   - Provide Parallel Arterial System
   - Improve Mode Split
   - Increase Local/Regional Trip Capture

   Regional Freeway System Mitigation

   - Increase Freeway Capacities

   Arterial Segment Mitigation

   - Increase Segment Capacities

   Arterial Intersection Mitigation

   - Increase Intersection Capacities

   Other Mitigation Strategies

   - Implement Transportation System Management Strategies
   - Implement Traffic Control Strategies

8. The following Project-specific measures shall be required for individual on-site and off-site segments and

intersections to mitigate significant impacts associated with the project.

On-site Network

- Upgrade EastLake Parkway between Orange Avenue and EUC North from four-lane major to six-lane major and provide special at-grade intersection design[1] or grade separated intersection design.
- Upgrade Village Two local between EUC North (La Media Road) and EUC North (Village Three loop road) from two-lane local collector to four-lane collector.
- Upgrade Village Three local between Village Three and Paseo Ranchero from two-lane local collector to three-lane collector.
- Upgrade Village Three local (Village Three loop road) from two-lane local collector to three-lane collector.
- Upgrade Village Six local between EUC major and Village Six collector from two-lane local collector to four-lane collector.
- Upgrade Village Seven local between Village Seven collector and Village Seven major from two-lane local collector to three-lane collector.

Off-site Network

The Applicant shall participate in fair share funding and implementation of the following:

- Upgrade Bonita Road between I-805 and Plaza Bonita Road by providing at-grade intersection (see footnote 1).
- Upgrade Bonita Road between Plaza Bonita Road and Willow Street by providing at-grade intersection (see footnote 1).
- Upgrade Bonita Road between Willow Street and Otay Lakes Road by providing special at-grade intersection design (see footnote 1).
- Upgrade Bonita Road between Otay Lakes Road and Central Avenue by providing special at-grade intersection design (see footnote 1).

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1 From major intersections, mitigation may require enhanced at-grade intersection design treatments including double left-turn lanes, exclusive unrestricted free right-turn lanes and/or additional through lanes where appropriate.

- Upgrade Camino Maquiladora between Otay Mesa Road and Heritage Road from two-lane local collector to four-lane collector.
- Upgrade Camoustie Road between Harvest Road and Domoch Court from two-lane local collector to three-lane collector.
- Upgrade Del Sol Road west of Paseo Ranchero from two-lane local collector to three-lane collector.
- Upgrade East 'H' Street between I-805 and Terra Nova Road from six-lane prime to eight-lane prime.
- Upgrade EastLake Parkway between Palomar Street and Orange Avenue from four-lane major to six-lane prime and provide special at-grade intersection design (see footnote 1).
- Upgrade EastLake Greens between Hunte Parkway from two-lane local collector to three-lane collector (loop road).
- Upgrade EastLake local between EastLake Parkway and EastLake Greens from two-lane local collector to four-lane collector.
- Upgrade EastLake Trails between Hunte Parkway and Hunte Parkway from two-lane local collector to three-lane collector (loop road).
- Upgrade Hunte Parkway between EastLake Trails and Orange Avenue from four-lane major to six-lane prime.
- Upgrade La Media Road between SR-905 and Airway Road from four-lane major to six-lane prime.
- Upgrade Oleander Avenue between Telegraph Canyon Road and Naples Avenue from twp-lane local collector to four-lane collector.
- Upgrade Otay Lakes Road between East 'H' Street and Telegraph Canyon Road by providing special at-grade intersection design (see footnote 1) or grade separated intersection design.
- Upgrade Otay Lakes Road between SR-125 and EastLake Parkway from six-lane prime to eight-lane prime, and by providing special at-grade intersection design (footnote 1) or grade separated intersections.
- Upgrade Paseo Del Rey between East 'H' Street and Telegraph Canyon Road from two-lane local collector to four-lane collector.

- Upgrade Paseo Ranchero between East 'J' Street and Telegraph Canyon Road from four-lane local collector to four-lane major.
- Upgrade Sweetwater Road between Bonita Mesa Road and Willow Street from four-lane collector to six-lane major (see footnote 1).
- Upgrade Sweetwater Road between Bonita Road and SR-54 from four-lane collector to four-lane major (see footnote 1).
- Upgrade Willow Street between Sweetwater Road and Bonita Road from a four-lane collector to a four-lane major.

If forecasted reductions in traffic activity resulting from village design and TDM analysis do not occur, additional mitigation described below would be required on the following segments:

- Upgrade EUC North between Village Two local and La Media Road from a four-lane collector to a four-lane major, and by providing special at-grade intersection design (see footnote 1) or grade separated intersection design.
- Upgrade Village Five local between Village Five collector and Palomar Street from two-lane local collector to three-lane collector.
- Upgrade Village Six local between Village Six collector and EUC major from two-lane local collector to three-lane collector.
- Upgrade Central Avenue between Bonita Road and Carrol Canyon Road from two-lane local collector to four-lane collector.
- Upgrade Hunte Parkway between Otay Lakes Road and EastLake Greens from a four-lane major to a sox-lane major by providing special at-grade intersection design (see footnote 1).
- Upgrade La Media Road between Otay Mesa Road and SR-905 from a four-lane major to a six-lane major and by providing special at-grade intersection design (see footnote 1).
- Upgrade Brittania Boulevard between SR-905 and Airway Road from four-lane major to six-lane major.
- Upgrade Millar Ranch Road between SR-94 and Proctor Valley Road from four-lane collector to four-lane major.

- Upgrade Orange Avenue between Hunte Parkway and EastLake Vista from four-lane major to six-lane major and provide special at-grade intersection design (see footnote 1).
- Upgrade Otay Lakes Road between Bonita Road and East 'H' Street by providing special at-grade intersection design (see footnote 1)
- Upgrade Paseo Ranchero between Otay Valley road and Del Sol Road by providing special at-grade intersection design (see footnote 1).
- Upgrade Wueste Road between Otay Lakes Road and Orange Avenue from two-lane local collector to three-lane collector.

If forecasted reductions in traffic resulting from village design and TDM analysis do not occur, additional segment mitigation, beyond special at-grade intersection upgrades as identified previously, would be required.

- Bonita Road between I-805 and Plaza Bonita Road from a four-lane major to a six-lane prime.
- Bonita Road between Plaza Bonita Road and Willow Street from four-lane major to six-lane major.
- Bonita road between Willow Street and Otay Lakes Road from four-lane major to six-lane prime.
- Bonita Road between Otay Lakes Road and Central Avenue from four-lane major to six-lane major.
- Bonita Road between Central Avenue and San Miguel Road from a four-lane collector to a four-lane major.

Air Quality (FEIR Section 4.9.12.2; cf. Table 4.2.12-6)

1. Construction emissions will be reduced through use of the following:
   - Minimize simultaneous operation of multiple construction equipment units.
   - Use low pollutant-emitting construction equipment.
   - Use electrical construction equipment as practical.
   - Use catalytic reduction for gasoline-powered equipment.
   - Use injection-timing retard for diesel-powered equipment.
   - Water the construction area at least twice daily.

- Stabilize (e.g., hydroseed) graded areas upon completion of grading.
- Pave permanent roads immediately after grading.

2. The following land use policies shall be included in the Specific Plans:

   - Provide neighborhood shopping and personal services adjacent to residential areas to minimize auto trips and reduce mileage traveled to service areas.
   - Provide open space and recreational facilities within or adjacent to the residential areas.
   - Provide employee services (i.e., banking, childcare, restaurants, etc.) within walking distance.
   - Provide a balanced mix of housing and employment possibilities to reduce trips and vehicle miles traveled.

3. The following siting/design policies shall be included in the Specific Plans:

   - Review site plans for the avoidance of potentially incompatible projects (e.g., residential near one of the quarries).
   - Provide dedicated bike lanes to encourage use of bicycles.
   - Provide bicycle storage facilities at employment and retail centers.
   - Provide shower and locker facilities at offices to encourage bicycle use.
   - Provide sidewalks and curbs to ensure safe pedestrian travel within residential areas and to commercial centers.
   - Provide street designs that promote pedestrian safety (i.e., safe islands in center of major arterials, "Walk" signals, night lighting, etc.).
   - Orient shopping centers to promote use by mass transit (i.e., provide bus turnouts), pedestrians, and bicyclist.
   - Design parking lots to promote use of mass transit and car pools.
   - Control emissions of NO_x by installing heat transfer modules on gas-fired furnaces.
   - Utilize solar heating to heat water for domestic use and for swimming pools. Advances in solar technology in the future may make other applications appropriate.
   - Utilize low-NO_x residential and commercial water heaters.

- Enhance energy efficiency in building designs and landscaping plans.
- Identify an environmental coordinator to be responsible for education and disseminating information on ridesharing and/or mass transit opportunities, recycling, energy conservation programs, etc.

4. The following transportation-related actions shall be incorporated into the project at the Specific Plan level:

   - Provide land for transit support facilities such as bus stops, park-and-ride lots, etc. A determination to dedicate land shall be made in consultation with MTDB.
   - Provide amenities to increase convenience and attractiveness of transit stops (i.e., passenger staging areas, waiting shelters, etc.).
   - Provide demand-responsive traffic signals.
   - Negotiate transit agency agreement to institute new routes or express bus service, or to expand existing service, related to the demand caused by the proposed project.
   - Require fair share participation for transit facilities and operation.
   - Comply with APCD Indirect Source Control Program, if adopted.
   - Major employers shall provide ridesharing or mass transit incentives.

5. The Applicant shall incorporate into the Specific Plans all feasible measures developed by the County of San Diego in the Regional Air Quality Strategy (RAQS) in response to the California Clean Air Act (CCAA).

Noise (FEIR Section 4.9.13.2)

1a. The Subregional Plan text indicates where site-specific acoustical analyses will be required. These areas where studies are required include:

   - All areas within 9,300 feet of the Nelson and Sloan Mining Operation and the Daley Quarry.
   - All areas within the 60 CNEL noise contour of on-site and off-site roadways, which shall include all roadways on the Otay Valley Parcel and all roadways assigned a future ADT of 3,000 trips or greater on the Proctor Valley and San Ysidro Mountains parcels.

- All areas within 1,250 feet of the Otay Landfill.
- All areas within one mile of the San Diego Air Sports Center.
- All areas adjacent to Least Bell's Vireo habitat and California gnatcatcher habitat.

1b. The studies shall provide a description of the Project, the existing noise environment, the methods of evaluation, the future acoustical environment, noise impacts, and the required mitigation measures. The study shall be prepared by a qualified acoustician in accordance with local standards for preparation of such studies. The following standards shall be achieved:

- Residential development within the impact area shall not be allowed unless the site-specific noise study shows that the exterior noise level can be mitigated to 60 CNEL or below, and that the interior noise level can be mitigated to 45 CNEL or below.
- Impacts to Least Bell's Vireo and California Gnatcatcher habitat shall be mitigated to achieve a level of 60 DBA L_{eq} or below.
- Proper site planning to reduce noise impacts shall be utilized for all noise-sensitive land uses. Site planning techniques shall include the following:
  - " Place commercial uses adjacent to the high noise roadways such as Heritage Road, Orange Avenue, Main Street, Paseo Ranchero, and State Route 125.
  - " Place less noise-sensitive land uses on parcels closest to significant noise generators such as the Nelson and Sloan Mining Operation, the Daley Quarry, the Otay Landfill, and adjacent to the various industrial activities.
  - " Increase the distance from the noise source to sensitive receptors by creation of setbacks.
  - " Place noise-sensitive land uses outside of the 60 CNEL noise contour of roadways.
  - " Place non-noise sensitive uses such as parking lots and utility areas between the noise source and receiver.
  - " Orient usable outdoor living space such as balconies, patios, and children play areas away from roadways.

- Noise barriers such as walls and earthen berms shall be used to mitigate noise from ground transportation sources when setbacks are not feasible. To be effective, a barrier(s) shall block the line-of-sight from the source to the receiver. A barrier shall also be of solid construction (e.g., masonry) without holes or gaps and be long enough to prevent sound from passing around the ends. A site-specific acoustical analysis shall be required to determine the proper height and placement of a barrier.

2. An interior acoustical analysis will be required for all residential buildings located within the 60 CNEL noise contour to ensure that the building's design limits the interior noise level to 45 CNEL or below.

Public Services and Utilities (FEIR Section 4.9.14.1)

Water Availability and Supply (cf. Section 3.13.1.3)

1. Upon completion of the comprehensive master plan currently under preparation by the Otay Water District (OWD), the facilities proposed for the Otay Ranch Project shall be reviewed for conformance to the OWD plan and current OWD standards, if the Project is ultimately annexed to OWD.

2. The Project shall annex land to the appropriate water jurisdiction, as necessary.

3. A Water Master Plan shall be prepared in conformance to the water standards of the appropriate district. The Master Plan shall include a Public Facilities Financing and Phasing Plan, a Water Conservation Plan, a Water Reclamation Plan and a Reclaimed Water Uses and Restrictions Plan. The Water Master Plan will provide:

   - Design Criteria and assumptions;
   - Information on how the project will satisfy MWD's Water Use Efficiency Guidelines;
   - Location and size; and
   - Operations and terminal storage.

4. The SPA Plan shall not be approved unless the Water Master Plan is accepted/approved by the appropriate jurisdiction.

5. Written verification from the water district that water will be provided concurrent with need shall be required prior to tentative map approval.

Wastewater and Sewer Service (cf. Section 3.13.2.3)

1. A determination shall be made as to which sewer district will serve each Specific Plan. If required by the chosen sewer district, a "will serve" letter (or other verification) will be obtained prior to development. When applicable, written approval of private subsurface sewage disposal systems shall be obtained from the County Department of Health Services.

2. A Sewer Master Plan shall be prepared in conformance to the sewer engineering and facility siting standards of the appropriate district. The Master Plan shall address location and size of facilities (on- and off-site) and a Public Facilities Financing and Phasing Plan.

3. The Sewer Master Plan shall achieve design criteria and assumptions in accordance with the appropriate agency.

4. A Sewer Master Plan shall be approved prior to the approval of each SPA Plan within Otay Ranch.

Integrated Solid Waste Management (cf. Section 3.13.3.3)

1. An Integrated Solid Waste Management Master Plan (ISWMMP) shall be prepared in coordination with the City of Chula Vista and the County of San Diego. The ISWMMP will provide for participation in an integrated waste management program to include:

   - Curbside recycling.
   - Neighborhood recycling/buy back centers.
   - A materials recovery facility.
   - A composting facility.
   - A house holds hazardous waste collection facility.

2. The ISWMMP shall be consistent with the Subregional Plan.

3. The SPA Plan shall not be approved unless the ISWMMP Is accepted/approved by the appropriate jurisdiction.

4. Each SPA shall include a condition requiring compliance with County and City programs and regulations concerning long-term solid waste capacity.

Police and Fire Protection, Emergency Medical Services

1. Police Protection (cf. Section 3.13.4.3):

   A Law Enforcement Services Master Plan shall be developed in coordination with the service provider and based on jurisdictional arrangements. The Master Plan shall address

County law enforcement standards and staff needs of CHP and will include:

- Types of facilities and equipment to be provided.
- Site and location criteria.
- Design techniques and guidelines to minimize crime.
- Funding mechanisms identified by the appropriate law enforcement agency.

The Master Plan shall assure the Project meets the following standards:

- Provide properly equipped and staffed law enforcement units to respond to 84% of "Priority One" emergency calls within 7 minutes and maintain an average response time of all "Priority One" emergency calls of 4.5 minutes or less (Urban Service).
- Provide properly equipped and staffed law enforcement units to respond to 62% of "Priority Two Urgent" calls within 7 minutes and maintain an average response time of all "Priority Two" calls of 7 minutes or less (Urban Service).
- Provide facilities for properly equipped and staffed law enforcement units to maintain an average response time of all "Priority One" calls of 12 minutes, and 24 minutes for low priority calls (Rural Service).

The SPA Plan shall not be approved unless the Law Enforcement Services Master Plan is accepted by the appropriate jurisdiction.

2. Fire Protection (cf. Section 3.13.5.3):

A Fire Protection Master Plan shall be developed in coordination with the service provider. The Fire Protection Master Plan shall address:

- Facilities requirements of the City and County.
- Site selection criteria.
- Specific site locations.
- Funding mechanisms.

The Master Plan shall demonstrate that the facilities shall enable the fire protection servers to achieve the urban and rural emergency response times established by the City of Chula Vista threshold and County of San Diego Public Facilities Element. The Fire Master Plan shall assure the Project meets the following standards:

- Provide sufficient fire and emergency services facilities to respond to calls within the Otay Ranch urban communities: within 7 minutes response time in 85% of the cases; a 10-minute travel time in the Otay Ranch estate communities with lots averaging more than 2 acres (and attendant neighborhood serving commercial); and a 20-minute travel time in the Otay Ranch rural communities with 4-acre lots or larger.

- Provide sufficient fire and emergency services facilities to respond to calls within: Otay Ranch single-family communities with residential lots of less than 2 acres, or more intensive uses as multi-family residential, including industrial development and all commercial development except neighborhood commercial, in a 5-minute travel time; Otay Ranch single-family residential lots from 2 acres to 4 acres, including neighborhood commercial development, in a 10-minute travel time; and Otay Ranch large lot single-family residential and agricultural areas with lot sizes greater than 4 acres in a 20-minute travel time.

The SPA Plan shall not be approved unless the Fire Protection Master Plan is accepted/approved by the appropriate jurisdiction.

3. Emergency Service (cf. Section 3.13.6.3):

   An Emergency Services Master Plan shall be developed in coordination with the service provider and approved by the appropriate jurisdiction and appropriate fire protection district.

   The Emergency Services Master Plan shall address facilities requirements including facilities for hazardous materials incidents, service locations, and funding mechanisms. The Master Plan shall demonstrate that a 10-minute emergency response time will be achieved and shall provide:

   - Fire protection service facilities concurrent with need.

   - Emergency service facilities concurrent with need.

4. Specific Plans shall include a Public Facilities Financing and Phasing Plan.

5. Each Specific Plan shall be required to meet the criteria of the approved master plan.

Schools (cf. Section 3.13.7.3)

1. A School Facilities Master Plan shall be developed in coordination with the affected school districts. The School Facilities Master Plan shall:

- Demonstrate that a maximum capacity of 650 elementary students, 1,500 middle school students and 2,500 high school students will be achieved.
- Identify the general locations of schools throughout the General Development Plan.

2. Documentation confirming school site locations and school district approval shall be provided. Funding shall also be addressed and confirmed according to school district procedures.

3. Specific Plans shall include a Public Facilities Financing and Phasing Plan.

4. Documentation confirming school district satisfaction of facility funding to fully mitigate Otay Ranch student generation impacts shall be provided.

Library Service (cf. Section 3.13.8.3)

1. A Library Master Plan shall be developed in accordance with the criteria of the applicable jurisdiction.

2. Specific Plans shall include a Public Facilities Financing and Phasing Plan.

Parks, Recreation, and Open Space (cf. Section 3.13.9.3)

1. Open space shall be provided in compliance with policies outlined in project's RMP, regarding permitted uses of the management preserve and the creation of a "Recreation Access Plan". The Recreation Access Plan shall address the following issues:

   - Establishing linkages between the Preserve trails and community and regional trail systems.
   - Identifying trail access points to the management preserve consistent with resource protection goals.
   - Establishing appropriate daily and seasonal limits on trail use.
   - Assuring that the kind and intensity of trail uses is consistent with protection of resource areas being traversed.
   - Within the RMP Management Preserve, permitted recreational uses shall be consistent with long-term protection and management of sensitive natural and man-made resources. A maximum of 400 acres within the Preserve may be designated for active recreational purposes. A range of public access and regional recreational uses shall be provided; permitted recreational uses shall include the following, so long as

they are designed in an environmentally-sensitive manner:

- Walking and hiking trails
- Limited wilderness-type camping and picnic facilities, equestrian trails, bicycle trails, link-style golf courses in non-sensitive areas
- Native plant nursery and botanical garden.

2. The Project shall provide 15 acres of regional park and open space per 1,000 Otay Ranch residents, a minimum of 3 acres of neighborhood and community park land per 1,000 Otay Ranch residents, and 12 acres of other active or passive recreation and open space per 1,000 Otay Ranch residents.

3. Recreational facilities and open space shall be provided in accordance with the Subregional Plan and the General Plan Amendments.

4. The Specific Plans shall further define the location, acreage, and boundaries of neighborhood and community parks and open space in a form and manner acceptable to the City of Chula Vista and the County of San Diego.

5. A Recreation Access Master Plan shall be developed in accordance with the required parkland acreage standards of the appropriate jurisdiction(s). The Master Plan shall be consistent with the Subregional Plan and shall address facilities requirements, site selection criteria, specific park site locations and funding mechanisms and provide a bicycle and trails plan.

6. The SPA Plan shall not be approved unless the Recreation Access Master Plan is accepted/approved by the appropriate jurisdiction.

7. Specific Plans shall include a Public Facilities Financing and Phasing Plan.

8. The funding source for local parks shall be the Park Lands Dedication Ordinance (PLDO) or similar exaction authority. If the PLDO is satisfied through the payment of fees, the park improvements shall be made by the jurisdiction or park district. If the PLDO is satisfied by land dedication, the developer shall provide turnkey facilities.

9. The reconstruction of the State Department of Recreation's California Riding and Hiking Trail shall be implemented along with the attendant roadway improvements. If necessary, easement relocation within Otay Ranch shall occur at the Applicant's expense.

Electricity and Gas

1. The project Applicant shall work with SDG&E during all stages of electrical and gas facilities planning to minimize disturbance to sensitive resources.

2. Land uses adjacent to the SDG&E transmission lines shall be subject to review and comment by SDG&E.

Health and Medical Facilities (cf. Section 3.13.11.3)

1. Governmental agencies and development planners shall work directly with service providers to identify the need for, and location of, medical and health facilities.

2. Siting and design criteria shall be developed to address public and private health and medical care facilities. Criteria should include, but not be limited to, consideration for impact of facility concentration on neighborhoods, access to transportation, and co-location of compatible programs where feasible.

Senior and Social Service Facilities (cf. Section 3.13.12.3)

1. Governmental agencies and development planners shall work directly with service providers to identify the need for, and location of, senior and social service facilities.

2. Specific Plans shall be circulated to the Commission on Aging, Department of Social Services, Area Agency on Aging, Human Services Council, and Chula Vista 21 for their review and input.

3. Planning for social services shall incorporate the following considerations:

    - The elderly have special needs for affordable housing, transportation, and health care. The number of persons 65 years of age and older requiring long-term care will continue to increase significantly, and as family size also decreases, there will be less family-based support and increased reliance on outside services for the elderly.

    - The public sector and community-based organizations will need to deliver services in more culturally sensitive ways. Close collaboration with ethnic and cultural groups will be essential.

Child Care Facilities (cf. Section 3.13.13.2)

1. A Child Care Master Plan shall be prepared to address site-selection criteria and acreage requirements based on the child-care demand of the project; location shall be next to public and private schools, religious assembly uses, village

center employment areas, transit centers or other locations deemed appropriate.

2. The SPA Plan shall not be approved unless the Child Care Master Plan is accepted/approved by the appropriate jurisdiction.

Animal Control (cf. Section 3.13.13.3)

1. The Project shall participate in programs to equitably share the funding of animal control facilities and designate animal control facilities sufficient to provide adequate square footage of shelter space per Otay Ranch dwelling unit to the satisfaction of the appropriate jurisdiction.

Risk of Upset (FEIR Section 4.9.15.2; cf. Section 3.14.3)

1. Soil and ground water testing shall occur in the Ranch operations center area potentially affected by the previous disposal of hazardous waste or historic pesticide use. The purpose of the testing shall be to identify areas of contamination in excess of Federal and State standards. Should areas of excess contamination be identified, remediation shall occur prior to residential development.

2. Prospective buyers and the California Department of Health Services (DHS) shall be notified of the intention to develop the area adjacent to the Otay Landfill and the Appropriate Technologies II hazardous waste facility.

3. The U.S. Army or other appropriate entity shall conduct a survey of the Brown Field Bombing Range to identify the presence of any unexploded ammunition. If any unexploded ordnance is located on the property, appropriate measures shall be taken for removal of the material.

4. The transport of hazardous waste on existing and future roadways shall be conducted in accordance with the California Code of Regulations (CCR) and the Code of Federal Regulations (CFR).

5. The need for emergency evacuation routes and other emergency facilities shall be determined at the Specific Plan level, if necessary, based on the presence of on-site industrial uses as well as the presence of off-site industrial uses.

Cumulative Impacts

Land Use (FEIR Section 6.3.3)

1. The Specific Plans developed for the areas of the Otay Valley Parcel adjacent to any of the alternate County landfill sites shall contain landscaping and buffering

guidelines designed to prevent land use interface impacts such as health hazards, noise, lighting and loss of privacy between Otay Ranch and these adjacent land uses.

Landform Alteration/Aesthetics (FEIR Section 6.4.3)

1a. No mitigation other than those measures already listed for project-specific impacts and the enforcement of existing regulations are necessary.

1b. Compliance with San Diego County Code Sections 59.101-115 (the County Dark Sky Ordinance). Compliance will be required even if a SPA is being developed under the jurisdiction of the City.

Biological Resources (FEIR Section 6.5.3)

1. The cumulative effects shall be mitigated through a combination of measures which ultimately concentrate on protecting the key resource areas and tying these areas together on-site and with adjacent off-site areas to create a viable regional open space preserve (see Section VIII of the EIR). The key component of this mitigation is the Resource Management Plan (RMP), which establishes minimum standards to be achieved with the development of the Project.

2. Sensitive habitats on Otay Ranch shall be restored or preserved to provide mitigation for both the loss of habitat and sensitive species due to development of the property. Restoration of disturbed habitats will increase the resource value of the habitat, as well as potentially provide links to key resource areas on both local and regional levels. Habitat restoration in areas that connect two or more otherwise isolated key resource areas will allow migration between subpopulations resulting in more viable populations.

3. Restoration of habitat in highly bio-diverse areas can play an important role min effectively increasing the population size of sensitive species. Disturbed portions of the Otay River Valley will be restored back to an intact riparian habitat, which will allow for an increase in the number of Least Bell's Vireo breeding pairs that will utilize the expanded habitat. Restoration of Diegan coastal sage scrub habitats will potentially contribute to the maintenance of the California gnatcatcher population on Otay Ranch, and disturbed coastal sage scrub habitat adjacent to areas currently utilized by cactus wren could be restored with maritime succulent scrub in order for the cactus wren population to expand.

Cultural Resources (FEIR Section 6.6.3)

1. A regional preservation plan with specific cultural resource preservation goals shall be established to determine what kind of database the managing agencies desire to retain after the region as a whole has been developed. Once a

plan and goals have been established, a specific resource preservation plan can be established and implemented specifically for the Otay Ranch project. This plan shall conform to regional preservation goals, establish realistic preservation measures that address secondary impacts, and long-term preservation and access to the database.

2. A regional repository shall be established and cultural material from the Project and the region shall be preserved in this repository. Furthermore, funding for its long-term preservation shall be secured to ensure preservation of the resources. The Applicant shall pay a fair share.

Geology and Soils (FEIR Section 6.7.3)

1. Cumulative impacts related to seismic ground shaking shall be avoided by designing and constructing proposed projects in accordance with the Uniform Building Code (UBC), state-of-the-art seismic design parameters of the Structural Engineering Association of California (SEAOC), and applicable local building codes as required by local agencies. No additional measures are necessary for seismic effects.

2. All significant geologic and soil impacts shall be mitigated through appropriate site-specific investigations and implementation of standard construction and design methods as described in Section VIII of the FPEIR.

Paleontology (FEIR Section 6.8.3)

No mitigation other than those measures already listed for project-specific impacts are necessary.

Agricultural Resources (FEIR Section 6.9.3)

No mitigation other than those measures already listed for project-specific impacts are available.

Mineral Resources (FEIR Section 6.10.3)

1. Project phasing in the San Ysidro Mountains and Proctor Valley Parcels shall allow for mineral extraction before conflicting development occurs, if feasible.

2. Compatible land uses shall be developed in areas where mineral extraction would likely occur.

Water Resources and Water Quality (FEIR Section 6.11.3)

1. Additional surface water modeling by a qualified hydrologist shall be conducted upon preparation of a final design plan at the Specific Plan level to indicate:

    - Location and number of detention basins to control the peak discharge at an acceptable level;

- Peak discharge values of specific locations important to the structural design of bridges, etc.; and
- Total volume of surface water discharge during a design storm.

Transportation, Circulation and Access (FEIR Section 6.12.3)

1. Each of the projects in the region will be required to construct appropriate improvements and contribute their proportionate share toward the construction of regional facilities.

Air Quality (FEIR Section 6.13.3)

1. The cumulatively significant degradation of regional air quality can be mitigated but not below a level of significance by implementing public transit and trip reduction programs on-site and by requiring housing and building designs that minimize air pollutant emissions. The Lead Agency has required Applicants within the Otay Parcel to contribute their fair share to LRT.

2. Project-specific and regional measures as discussed in Section VII of the FPEIR are required.

Noise (FEIR Section 6.14.3)

1. Future acoustical studies shall be required for residences and other noise sensitive land uses exposed to exterior noise levels of 60 CNEL or greater for all projects within the jurisdiction of the agency.

2. Future acoustical studies shall be required for Least Bell's Vireo habitat and California Gnatcatcher habitat exposed to noise levels of 60 DBA L_{eq} or greater for all projects within the jurisdiction of the agency.

3. Noise attenuation techniques, such as construction of walls and/or earthen berms between sensitive uses and significant noise sources shall be required to achieve standards as discussed in Section VIII of the FPEIR.

Public Services (FEIR Sections 6.15.1.5 through 6.15.9.5, et seq.)

1. Water facilities studies, sewer basin studies, solid waste facilities studies, police protection, fire protection and emergency service facilities studies, schools facilities studies, library facilities studies, and park, recreation and open space studies, as required under project-specific mitigation, shall include financing plans and an analysis of cumulative demand within each serve zone or area. Each developer shall be required to construct, or contribute

toward the cost of constructing, any required regional facilities.

Risk of Upset (FEIR Section 6.16.3)

No mitigation other than those measures already listed for project-specific impacts and the enforcement of existing regulations are necessary.

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Exhibit A *Summary of Biological Mitigation Measures*

Diegan Coastal Sage Scrub (CSS)

- The Project shall be designed to preserve at least 74% of the coastal sage scrub on-site including significant portions of CSS in the key areas identified below:
  - Salt Creek
  - Poggi and Wolf Canyons
  - Rock Mountain and existing CSS on north side of Otay River Valley
  - Patches of CSS south of Lower Otay Lake and the San Diego Air Sports Center.
- 1,300 acres of identified high priority CSS areas on the Project site shall be restored (see Figure 3.3-8 in the FPEIR). This restoration shall include a minimum of 56 acres of maritime succulent scrub. The restoration shall follow the conceptual coastal sage scrub revegetation plan in the RMP (p. 130-138, Section 4.3.1).
- Coastal sage scrub restoration activities shall commence prior to or concurrent with approval of the first Specific Plan within Otay Ranch and shall have achieved success, based on performance standards described below and in future detailed restoration plans, prior to or concurrent with any project approval for development resulting in significant impacts to coastal sage scrub habitat occupied by California gnatcatchers.

  The success of a specific coastal sage scrub restoration effort will be measured by its ability to replace the habitat values lost, and by its ability to support native plant and wildlife species typical of coastal sage scrub. The following are success criteria that shall be achieved:

  - The shrub layer within each revegetated patch will consist of at least four site-typical native shrub species found on Table 3 (p. 142 of the RMP), or 60% of the species determined to occur in the target patch of the preferred habitat type, whichever is greater. The herb layer will consist of at least four native grass or herb species, or 60% of the native grass or herb species found in the target patch, whichever is greater.
  - The percent cover composition of the shrub and herb layers will be determined by qualitative analysis of a target patch of vegetation. The target patch may be a different subtype

of coastal sage scrub than that being disturbed; the availability of the mitigation site will determine which subtype is most appropriate for restoration. Factors as described herein regarding current habitat quality of the to-be-disturbed site will be measured, including total species number, number and prevalence of exotic species, and shrub and herb density. Additionally, factors contained in Chapter 4, specifically Table 4 of the RMP, shall be achieved.

Wildlife use will be measured using birds. In a patch greater than 25 acres. There will be use by at least 80% of the bird species found to be present in the target patch of the preferred habitat type (greater than 25 acres) or five scrub-requiring bird species from the following list of resident species, whichever is greater.

- Bewick's wren
- Cactus wren
- California gnatcatcher
- California quail
- California thrasher
- California towhee
- Rufous-crowned sparrow
- Rufous-sided towhee
- Sage sparrow
- Scrub jay
- Wrentit

o Potential indirect impacts shall be mitigated by providing a minimum 100-foot buffer area around all preserved coastal sage scrub. No development, landscaping or in wholesale clearing for fire management shall be allowed within the buffer area. Selective thinning for fire management shall be allowed within the buffer.

Maritime Succulent Scrub (MSS)

o The Project shall be designed to preserve at least 80% of the maritime succulent scrub on-site.

o Disjunctive stands shall be protected, especially where they support cactus thickets and can logically be tied to a larger open space network.

o A minimum of 56 acres of maritime succulent shall be restored in conjunction with the CSS restoration of 1,300 acres.

Floodplain scrub, Southern Willow Scrub, and Aquatic/ Freshwater Marsh

- The Project shall be designed to retain at least 95% of the floodplain scrub, southern willow scrub, and aquatic/ freshwater marsh habitats. Restoration/enhancement of disturbed wetland habitat shall occur in the Otay River Valley within tamarisk/mulefat scrub habitat (see Figure 3.3.8 in the FPEIR) to mitigate the remaining impacts.

- Impacts shall be avoided through placement and design features (i.e., road location and infrastructure design) and the application of restoration ratios as defined by the appropriate public agencies. Development shall not occur until compensation has been approved by the California Department of Fish & Game through the Streambed Alteration Agreement and/or the Corps of Engineers 404 permit process, as required in accordance with their no net loss standard.

Non-native Grassland (NNG)

- The provision of a large open space system with open habitats and native grasslands will substantially lessen this impact; however, not to a level below significance.

Valley Needlegrass Grassland/Perennial Grassland (PG)

- The Project shall be designed to preserve at least 25% of the valley needlegrass grassland.

- High priority areas for preservation and restoration shall include the disturbed perennial grassland contiguous within the K6 vernal pool complex and large San Diego thorn-mint population north of Lower Otay Lake, and in selected areas in the Otay Valley Parcel to be determined by subsequent field transect studies.

- Restoration at a ration of between 1:1 and 3:1 (restored to impacted habitat) shall be required. A mitigation program including an experimental phase and a maintenance and monitoring program is required.

Alkali Meadow

- The Project shall be designed to preserve at least 72% of alkali meadow.

- Impacts shall be substantially lessened through placement of development and design features (i.e., road location and infrastructure design) and application of a ratio as defined by the appropriate public agency; however, no less than 1:1 based on habitat type and quality and whether pre-establishment of in-kind habitat has occurred. Development shall not occur until compensation has been approved by the California Department of Fish & Game through the Streambed Alteration

Agreement and/or the Corps of Engineers 404 permit process, as required in accordance with their no net loss standard.

- Potential indirect impacts shall be mitigated by providing a minimum 100-foot width buffer area on either side of all alkali meadow habitat. No development or landscaping shall be allowed within the buffer areas. Impacts to alkali meadow from hydrological alterations (including potential displacement of native habitat with exotic and wetland species) shall be mitigated as described herein. The water runoff from surrounding development shall be diverted and controlled to retain the same amount and seasonality of water input existing before development. A study shall be required at the Specific Plan level of analysis to determine existing hydrological conditions of streams containing alkali meadow and what hydrological changes will occur to these streams after development. The results of these studies shall be used to engineer the storm drain system to achieve pre-impact hydrological conditions.

Vernal Pools

- The Project is designed to preserve 95% of large or high value vernal pool complexes and preservation of 95% of all other vernal pools. The vernal pool complexes on Otay Ranch that are large or of high value and which require 100% preservation include J23-24, J25 and J30 on Otay Mesa; K1 and K15+ in Otay River Valley; and R3 in Proctor Valley. K6, K8 and K12 are in a special study area to determine whether they should be preserved.

- The Project is designed to preserve that portion of vernal pool J29 (including J31+) containing sensitive species, including a minimum 100-foot width buffer.

- The allowed 5% impact to any of the lower quality vernal pool complexes shall be substantially lessened by restoration/ enhancement of damaged vernal pool habitat within disturbed areas of the preserved vernal pool complexes so that no net loss of vernal pool habitat value or area occurs. Mitigation shall be consistent with the requirements of Section 404 of the Clean Water Act. Restoration shall include de-compaction, sculpting and re-contouring, and seeding of basins disturbed by dirt roads, trails, or scraped areas. Vernal pools shall also be enhanced through removal of exotic plant species. Re-introduction of declining vernal pool species to suitable areas for re-colonization shall also be required. Impacts to vernal pool habitat will occur only after successful completion of the restoration program. The vernal pool restoration/enhancement plan shall include an experimental phase and maintenance and monitoring program. Success criteria shall be based on established standards relative to undisturbed (i.e., least disturbed) vernal pools within the same

vernal pool complex. Attributes to be used include water retention, percent cover of native vernal pool species, and diversity of native vernal pool and associated species. Restoration and enhancement methodologies shall be developed during the experimental phase and shall follow the strategies outlined in the RMP. Vernal pool restoration shall achieve the following:

- Restore the biota of individual, badly degraded vernal pools;
- Increase diversity and frequency of native biota in all disturbed vernal pools;
- Preserve and enhance vernal pools on K6 where little mousetail occurs;
- Reduce the effect of alien plants;
- Enhance the populations of sensitive species;
- Stabilize soils on mounds and in watershed areas;
- Provide research and educational opportunities.

o Potential indirect impacts shall be mitigated by providing a minimum 100-foot width buffer area around the vernal pools and their watershed. A larger buffer area and implementation of other measures (e.g., fencing, educational signage, diversion of urban runoff) shall be required as necessary to eliminate adverse effects of drainage, trampling, vehicles, dumping, and collecting and to provide sufficient resources to support appropriate pollinators and dispersal agents.

Woodlands (*Coast Live Oak Woodland, Southern Live Oak Riparian Forest, Southern Interior Cypress Forest, and Sycamore Alluvial Woodland)*

o The Project is designed to preserve 100% of the southern interior cypress forest, coast live oak woodland, and southern live oak riparian forest and sycamore alluvial woodland.

o Potential indirect impacts shall be mitigated by providing a minimum 100-foot width buffer area around the sensitive habitat, within which no development or landscaping shall be allowed. Impacts to these woodlands from hydrological alterations (including potential displacement of native woodland habitats with exotic and wetland species) shall be avoided. The storm drain system shall be engineered to achieve the pre-impact hydrology for each of the woodland habitat types.

Sensitive Plants

- Updated sensitive plant surveys shall be conducted to quantify acreage of occupied habitat and plant densities or population sizes for each Specific Plan.

- The Project shall be designed to attain the species-specific preservation standards defined below.

- Indirect impacts to preserved populations of all sensitive plant species shall be avoided or minimized by implementing the following measures:

    - Buffers (i.e., setbacks from developed, landscaped, or other use areas) shall be provided around the occupied and/or critical habitat (e.g., watershed for vernal pools, floodplain or drainage for willowy monardella) for all preserved populations. Buffers shall be of adequate size and configuration to eliminate adverse effects of trampling, vehicles, dumping, collecting, and adjacent construction, and, in conjunction with the preserved habitat, shall include sufficient resources to support appropriate pollinators. Buffer widths shall be a minimum of 50 feet. Buffer widths shall be determined on a species-specific basis and will be dependent on the sensitivity of the species, the susceptibility/tolerance of the species and/or its habitat to disturbance, and the adjacent land use.

    - Significant impacts to State listed endangered plant species shall require a mitigation plan at the Specific Plan level of analysis. Such a plan shall include an experimental phase and a maintenance and monitoring program; however, the length of the experimental and mitigation phases shall be governed by success criteria specified in the mitigation plans rather than by a set number of years.

    - For sensitive species occurring within seasonal streams, the water runoff from surrounding development shall be diverted and controlled to retain the same amount and seasonality of water input existing before development. A study to determine existing hydrological conditions and a hydrological analysis of the streams within the proposed development that contain sensitive plant species shall be required at the Specific Plan level of analysis. The results of these studies shall be used to engineer the storm drain system to reflect pre-impact hydrological conditions over the long-term. Species occurring in intermittent streams for which the above mitigation shall apply include willowy monardella, Otay manzanita, Orcutt's brodiaea, summer-holly, Tecate cypress, San Diego sagewort, Orcutt's bird-beak, San Diego marsh-elder, spiny rush, Campo clarkia, San Miguel savory, and Engelmann oak.

- A Fire Management Plan shall be developed in accordance with the RMP to protect and appropriately manage populations of sensitive plant species.

San Diego Thorn-mint *(Acanthomintha ilicifolia)*

- The Project shall be designed to preserve the largest San Diego thorn-mint population and 95% of the overall species on-site, including watershed, any associated critical habitat and a minimum of a 100-foot width buffer zone.
- Thorn-mint shall be introduced on appropriate soils on the Project site. The creation of artificial populations shall require seed salvage of impacted populations, nursery propagation to increase seed and sowing of seed.
- A clay soil lens suitable for San Diego thorn-mint that is not presently occupied by this species shall be used for the mitigation areas. If no such area is available as determined by a plant ecologist and a soil scientist during the experimental phase of the mitigation program, acquisition and long-term protection of an off-site population shall be required.

San Diego Button-celery *(Eryngium aristulatum var. parishii)*

- The Project shall be designed to preserve at least 95% of species on-site and to preserve 100% of species where occurring with other vernal pool indicator species.
- Vernal pools shall be restored and the species shall be re-introduced into disturbed or historical vernal pools.

Otay Tarplant *(Hemizonia conjugens)*

- The Project shall be designed to preserve at least 80% of the species.
- The species shall be introduced in areas with appropriate soils, including seed salvage and nursery propagation to increase seed sowing.

Willowy Monardella *(Monardella liniodes ssp. viminea)*

- The Project shall be designed to preserve 100% of the species on-site.
- Water input shall be regulated to prevent significant indirect impacts from decreased or increased water flow from the development.
- The intact population shall be monitored for five years to assure that indirect impacts (trampling, dumping and hydrological alterations) of the development do not jeopardize the intact population. Remedial measures (restoration, trash removal and fencing repair) must be implemented to assure preservation of the intact population.

Otay Manzanita *(Arctostaphylos otayensis)*

- o The Project shall be designed to preserve at least 80% of the species on-site, including populations in northern Jamul Mountains.
- o Impacted plants shall be propagated and re-established to suitable slopes.

Orcutt's Brodiaea *(Brodiaea orcuttii)*

- o The Project shall be designed to preserve at least 75% of the species on-site.
- o Water input shall be regulated to prevent significant indirect impacts from increased or decreased water flow from development.
- o A 5-year monitoring of intact population shall be required to:
  - Identify significant indirect impacts of development (e.g., trampling, dumping, hydrological alterations); and
  - Implement remedial measures (e.g., restoration, trash removal, repair fencing, etc.).

Variegated Hasseanthus *(Dudleya variegata)*

- o The Project shall be designed to preserve at least 75% of the species on-site, including representative population(s) from each of the three parcels; and
- o Impacted plants shall be transplanted to appropriate habitat and clay soils within same parcel.

San Diego Coast Barrel Cactus *(Ferocactus viridescens)*

- o The Project shall be designed to preserve at least 75% of the species on-site, including representative populations from each of the three parcels; and
- o Impacted plants shall be transplanted to appropriate habitat within same parcel.

San Diego Goldenstar *(Muilla clevelandii)*

- o The Project shall be designed to preserve at least 54% of known point occurrences for the species on-site, including representative populations from each of the three parcels; and
- o Corms and soil shall be salvaged and species shall be introduced in appropriate soils and habitat in protected open space within the same parcel.

San Diego Navarretia *(Navarretia fossalis)*

- The Project shall be designed to preserve 100% of the presently known locations of the species and retaining all of the J29 pools complex with *Navarretia*.

Snake Cholla *(Opuntia parryi var. serpentina)*

- The Project shall be designed to preserve at least 80% of the species on-site; and
- Impacted plants shall be transplanted to restored coastal sage scrub In protected open space.

Narrow-leaved Nightshade *(Solanum tenuilobatum)*

- The Project shall be designed to preserve at least 75% of the species on-site; and
- The species shall be re-established in disturbed areas with suitable soils or introduced in suitable open space.

Delicate Clarkia *(Clarkia delicata)*

- The Project shall be designed to preserve at least 75% of the species on-site and to avoid all impacts to the population in the canyon in northeastern Jamul Mountains.

Orcutt's Bird-peak *(Cordylanthus orcuttianus)*

- The Project shall be designed to preserve at least 75% of the species on-site and to avoid all impacts to population in the canyon south of the San Diego Air Sport Center. To avoid indirect impacts in the canyon south of the San Diego Air Sports Center all canyon slopes shall also be included in open space.

San Diego Marsh-elder *(Iva hayesiana)*

- The Project shall be designed to retain at least 75% of the species on-site; and
- The species shall be revegetated at a 2:1 ratio (restored in impacted habitat) in intermittent drainages that have been disturbed;
- Container plants shall be propagated with seed collected from the Project site;
- The species shall be included in restoration of alkali meadow habitat.

Munz's Sage *(Salvia munzii)*

- The Project shall be designed to preserve at least 61% of point occurrences on-site for the species.

- Munz's sage-dominated coastal sage scrub shall be restored on the Project site at a 2:1 ratio (restored to impacted habitat) using seed and container plants.

Greene's Ground Cherry *(Physalis greenei)*

- Additional survey work shall be conducted to verify presence of this species; and
- If present, the Project shall be designed to preserve at least 50% of the species; and
- The species shall be re-established or introduced into suitable habitat, using seed salvage and nursery propagation to increase seed source.

San Diego County Stipa *(Stipa diegoensis)*

- The Project shall be designed to preserve at least 75% of the species on-site; and
- The species shall be re-established in disturbed areas or introduced in suitable open space; the re-establishment shall include seed salvage, propagation of nursery plugs, and planting of plugs and seed.

San Diego Sunflower *(Viguiera laciniata)*

- The Project shall be designed to retain at least 75% of the species on-site; and
- Viguiera-dominated coastal sage scrub shall be restored at a 2:1 ratio (restored to impacted habitat) using seed from the Ranch.

California Adder's-tongue Fern *(Ophioglossum lusitanicum ssp. californicum)*

- The Project shall be designed to preserve at least 50% of the species on-site.

Coulter's Matilija Poppy *(Romneya coulteri)*

- The Project shall be designed to preserve at least 50% of the species on-site.

Least Bell's Vireo *(Vireo bellii pusillus)* and Southwestern Willow Flycatcher *(Empidonax trailli extimus)*

- 100% (or approved Habitat Conservation Plan/San Diego Multiple Species Conservation Program (HCP/MSCP) standards) of occupied habitat for these species shall be preserved.
- Prior to the first Specific Plan containing Least Bell's habitat, the Applicant shall conduct a focused study of Least Bell's Vireo distribution and abundance along Otay River and

Dulzura Creek adjacent to the San Ysidro Mountains Parcel. Prior to the first Specific Plan containing Southwestern Willow Flycatcher's habitat, the Applicant shall conduct a focused study of Southwestern Willow Flycatcher's distribution and abundance along Otay River and Dulzura Creek adjacent to the San Ysidro Mountains Parcel. Direct impacts from construction or expansion of the following roads to both species shall be assessed:

- Otay Valley Road in Otay River Valley
- Heritage Road crossing of Otay River
- La Media Road crossing of Otay River
- SR-125 crossing of Otay River
- Otay Lakes Road at Dulzura Creek
- Alta Road crossing of Otay River (County Final Plan, only)
- Any additional roads that cross or run adjacent to Otay River or Dulzura Creek that have the potential to significantly impact Least Bell's Vireo.

o A mitigation plan shall be prepared and implemented for any direct impacts from road construction. Measures in the plan shall include one or more of the following as required to reduce the impact below a level of significance:

- The Project's roadways shall be designed to avoid all direct impacts to occupied Vireo habitat. Potential re-alignments may include:

  " Otay Valley Parkway

  " La Media Road - Design to avoid occupied habitat.

  " Alta Road

  " Otay Lakes Road

- Riparian habitat shall be restored or enhanced along the Otay River Valley in exchange for impacting unoccupied potential Vireo habitat.

o Prior to approval of the first Specific Plan containing Least Bell's Vireo, the Applicant shall conduct a study of indirect impacts (see below) on this species from proposed development and roads. The focus of this study shall be effects of a village center and residential housing on the Dulzura Creek Least Bell's Vireo population, the effects of the proposed Otay Valley Regional Park on the Otay River population, and the effects of roads on both populations. Evaluation of impacts shall be based on the baseline data in the Final Program EIR and from current distribution and abundance data obtained from

surveys conducted at the Specific Plan level. A partial listing of potential indirect development and road impacts, which shall be considered are:

- Human activity and disturbance.
- Noise impacts from roads and adjacent development. A noise study shall be conducted to determine noise impacts from roads adjacent to, within, or near Vireo habitat, and from development adjacent to Vireo habitat (e.g., at Dulzura Creek).
- Introduced predators such as cats.
- Increased potential for brown-headed cowbird parasitism.
- Construction noise, dust, and disturbance.
- Invasion of non-native vegetation (i.e., *Eucalyptus* species, *Arundo* species, etc.)
- Artificial lighting from developed areas.
- Recreation related impacts.
- Habitat degradation and fragmentation.
- Changes in existing water quality and quantity, which could negatively affect riparian habitat.

o Prior to approval of the first Specific Plan containing Southwestern Willow Flycatcher, the Applicant shall conduct a study of indirect impacts (see below) on this species from proposed development and roads. The focus of this study shall be effects of a village center and residential housing on the Dulzura Creek Southwestern Willow Flycatcher population, the effects of the proposed Otay Valley Regional Park on the Otay River population, and the effects of roads on both populations. Evaluation of impacts shall be based on the baseline data in the Final Program EIR and from current distribution and abundance data obtained from surveys conducted at the Specific Plan level. A partial listing of potential indirect development and road impacts, which shall be considered are:

- Human activity and disturbance
- Noise impacts from roads and adjacent development. A noise study shall be conducted to determine noise impacts from roads adjacent to, within, or near Vireo habitat, and from development adjacent to Vireo habitat (e.g., at Dulzura Creek).
- Introduced predators such as cats.
- Construction noise, dust and disturbance.

- Invasion of non-native vegetation (i.e., *Eucalyptus* species, *Arundo* species, etc.)
- Artificial lighting from developed areas.
- Recreation related impacts.
- Habitat degradation and fragmentation.
- Changes in existing water quality and quantity, which could negatively affect riparian habitat.

o If it is determined during the environmental review for Specific Plans that indirect impacts to the Least Bell's Vireo or Willow Flycatcher from development or roads are significant, a mitigation plan shall be prepared and implemented at the Specific Plan level. This mitigation shall be incorporated into the general mitigation plan. Mitigation measures shall be based on approved standards by the appropriate public agency(ies) in effect at the time of the Specific Plan development. Mitigation shall parallel the recommendations in the Resource Management Plan (e.g., in regards to lighting, plantings allowed in landscaping adjacent to occupied habitat, etc.). At a minimum, the following measures shall be incorporated into the mitigation plan:

- Restrict human access to occupied habitat in the breeding season (March 15 to August 31).
- Require a minimum of a 100-foot biological and an adjoining 100-foot planting buffer along the edges of occupied, potential, and restored habitats.
- As necessary, increase open space easements to buffer noise impacts pending recommendations of the noise study.
- Implement an introduced predator management program.
- Implement a brown-headed cowbird management program.
- Employ measures to reduce construction impacts, including avoiding construction adjacent to or within occupied habitat during the breeding season (March 15 to August 31).
- Limit landscaping adjacent to occupied habitat (within the buffer zones) to native vegetation.
- Restrict the use of invasive, introduced plantings in landscaping adjacent to the buffer zones.
- Restrict lighting close to occupied habitat.

- Maintain and enhance where appropriate the existing water quality and quantity in occupied, potential, and restored habitats for this species.

o Prior to approval of the first Specific Plan, a management plan in conjunction with the RMP shall be prepared and implemented for this species. The species management plan shall include provisions for periodic monitoring of populations within the Preserve as well as any significant on-site populations not included within the Management Preserve. The species management plan shall include appropriate management techniques approved by the resource agencies to maintain and, where feasible, to enhance existing on-site population(s).

Tri-colored Blackbird *(Agelaius tricolor)*

o The Project shall be designed to preserve 100% (or approved HCP/MSCP standards) of nesting habitat for this species.

o At the Specific Plan level, the Applicant shall conduct focused breeding surveys for this species in appropriate habitat.

o Direct and indirect impacts shall be assessed to breeding habitat from proposed development and roads. This includes assessing noise impacts from any proposed road alignments adjacent to preserved habitat.

o Preserve natural open space all occupied and restored breeding habitat, and where feasible, potential breeding habitat.

o Include within the Management Preserve all preserved habitat.

o To mitigate for impacts to potential habitat, restore or enhance suitable breeding marsh habitat along the Otay River.

o Avoid construction of roads and other development during the breeding season (March 1 to August 31).

o Preserve open space buffer zones around occupied, potential, and restored habitats. The minimum width of the buffer zone shall be determined at the Specific Plan level in conjunction with, and upon the approval of, the resource agencies.

o Mitigation for foraging habitat loss shall be done in conjunction with mitigation for raptor grassland foraging habitat.

o Prepare and implement a management plan for this species.

Cactus Wren *(Campylorhynchus brunneicapillus)*

o The Project is designed to achieve the following standards:

- No loss of viable Cactus Wren populations;

- Preserve adequate habitat within the Preserve to maintain no loss of viable Cactus Wren populations.

- o At the Specific Plan level, the Applicant shall reassess impacts to this species using detailed development plans, baseline data from the Final Program EIR, and updated distribution and abundance data from Specific Plan level surveys.

  - The Applicant shall conduct focused surveys of appropriate habitat at the Specific Plan level to determine abundance and distribution of this species prior to development. Territories shall be delineated for those individuals/pairs, which occur or could occur within or adjacent to proposed development and roads.

  - The Applicant shall evaluate direct impacts to territories of individuals and pairs from proposed development. Impacts to locations of pairs/individuals for which habitat has been eliminated since the start of the environmental documentation process shall also be evaluated.

  - Areas of CSS/MSS habitats that shall be enhanced or restored include:

    " Agricultural lands on the mesa and in ravines bordering the west side of Salt Creek Canyon.

    " Agricultural lands, non-native grassland (NNG), and disturbed CSS habitats along the north slope of the Otay River Valley and as appropriate along the bottom of the valley.

    " Agricultural lands and NNG bordering and within Wolf Canyon, bordering and within Poggi Canyon, and along the shallow ravine identified as a gnatcatcher and cactus wren corridor linking the two canyons.

    " NNG within a adjacent to Johnson Canyon.

  - Unavoidable impacts to occupied habitat shall be mitigated through habitat creation, restoration, or enhancement of disturbed habitats. Impacts to high quality potential habitat and to sighting locations for which habitat has been eliminated since the start of the environmental documentation process for the Final Program EIR shall also be mitigated through habitat creation, restoration, or enhancement. Mitigation ratios for occupied and potential habitat shall be based on accepted standards of the appropriate public agency at the time Specific Plan development occurs, and shall be set through consultation with, and approval from, the resource agencies.

  - Creation, restoration, and enhancement of disturbed habitat as mitigation for occupied habitat, shall occur prior to impacting the occupied habitat. A focused study shall document occupancy and breeding of the impacted species

in the created, restored, or enhanced habitat before the occupied habitat can be impacted.

- Prepare and implement a long-term management plan for this species.

o Direct impacts shall be assessed from proposed road construction at the Specific Plan level. Road alignments to be considered include:

- Otay Valley Road along the northern slope of the Otay River Valley
- Hunte Parkway along the west side of Salt Creek Canyon
- Paseo Ranchero Road across Poggi Canyon
- East Orange Avenue through Poggi Canyon
- SR-125 alignment on the north slope of the Otay River Valley and through Johnson Canyon
- Alta Road through lower Salt Creek
- Palomar Street north of Poggi Canyon
- La Media Road at the north slope of the Otay River Valley
- Any other proposed roads with potential to impact occupied or potential habitat.

o A mitigation plan shall be prepared and implemented for significant direct impacts to the species from road construction.

- Alignments shall be redesigned to achieve Project standards. Potential re-alignments may include:
  - " Otay Valley Road
  - " Hunte Parkway
  - " Paseo Ranchero Road
  - " East Orange Avenue
- All roads crossing gnatcatcher and cactus wren corridors shall conform to the recommendations of the otay Ranch Wildlife Corridor Study.

California Gnatcatcher *(Polioptila californica)*

o The Project is designed to preserve 70% of California Gnatcatcher habitat on-site, to restore an additional 15% of California Gnatcatcher habitat and to preserve 59% of documented pairs and individuals.

- Impacts in the following areas shall be assessed and Project standards achieved:
  - Otay Lakes Road through the Jamul Mountains
  - Proctor Valley Road through the disjunct L-shaped parcel.

Riverside Fairy Shrimp *(Streptocephalus woottoni)*

- 100% (or approved HCP/MSCP standards) of occupied habitat for this species shall be preserved.
- At the Specific Plan level, the Applicant shall conduct a focused study of the distribution and abundance of these species within vernal pool habitat on Otay Ranch.
- The Applicant shall assess direct and indirect impacts to occupied and potential habitat (including vernal pools and associated watersheds) from proposed development and roads. The following is a partial listing of impacts, which shall be considered:
  - Direct impacts to occupied and potential habitat (including vernal pools and associated watersheds).
  - Modifications of the watershed from development or roads, which could change the water availability and water quality (e.g., pool chemistry) in vernal pools. Any changes to the watershed or vernal pools themselves could affect this species in an adverse way.
  - The introduction of harmful chemicals into vernal pools through runoff from adjacent development, roads, and other land uses.
  - Habitat degradation and fragmentation from adjacent development and roads.
  - The introduction and proliferation into potential or occupied habitat of sensitive fairy shrimp, competitor species, such as *Branchinecta lindahli*. Harmful competitors could be introduced through the habitat restoration and enhancement process or through improper fairy shrimp re-introduction techniques.
  - Any adverse impacts from increased human activity and presence (e.g., off-road vehicle activity, trampling of pools, illegal dumping, etc.).
- A mitigation plan shall be prepared and implemented for significant direct and indirect impacts from proposed development or roads. The following shall be incorporated into the mitigation plan:
  - Preserve vernal pool complexes and associated watersheds where this species occurs or has the potential to occur.

The Project shall be designed to avoid impacts to all occupied habitat. Additionally, the Project is designed to avoid all impacts to the greatest extent feasible, impacts to potential habitat.

- Include within the Preserve all occupied, restored, vernal pool habitat and associated watersheds.
- Provide a 100-foot buffer around all preserved vernal pool complexes and associated watersheds.
- Restore or enhance disturbed vernal pool habitat to mitigate for unavoidable direct impacts to potential habitat or for indirect impacts to occupied habitat. Mitigation ratios for potential vernal pool habitat shall be based on accepted standards at the time that Specific Plan development occurs, and shall be established through consultation with, and approval from, the resource agencies.
- Restore or enhance already disturbed habitat prior to impacting potential vernal pool habitat.
- As mitigation for impacts to potential habitat, conduct a study at the Specific Plan level concerning the feasibility of re-introducing this species into restored or enhanced vernal pool habitat. If feasible, use approved methodologies for introduction and monitoring of re-introduced populations.
- Maintain connectivity, to the extent feasible, within preserved vernal pool complexes and between adjacent or nearby vernal pool groups.
- Develop and implement a plan to eliminate harmful runoff from development and roads while still maintaining sufficient water supply for maintaining and where appropriate enhancing occupied, potential, and restored vernal pool habitat.

o A management plan shall be prepared and implemented for these species.

San Diego Vernal Pool Fairy Shrimp *(Branchinecta sandiegensis)*

o The Project is designed to preserve 95% of occupied habitat for the species where co-occurring with vernal pool habitat.

o At the Specific Plan level, the Applicant shall conduct a focused study of the distribution and abundance of these species within vernal pool habitat on Otay Ranch.

o The Applicant shall assess direct and indirect impacts to occupied and potential habitat (including vernal pools and

associated watersheds) from proposed development and roads. The following is a partial listing of impacts, which shall be considered:

- Direct impacts to occupied and potential habitat (including vernal pools and associated watersheds).
- Modifications of the watershed from development or roads, which could change the water availability and water quality (e.g., pool chemistry) in vernal pools. Any changes to the watershed or vernal pools themselves could affect this species in an adverse way.
- The introduction of harmful chemicals into vernal pools through runoff from adjacent development, roads, and other land uses.
- Habitat degradation and fragmentation from adjacent development and roads.
- The introduction and proliferation into potential or occupied habitat of sensitive fairy shrimp, competitor species, such as *Branchinecta lindahli*. Harmful competitors could be introduced through the habitat restoration and enhancement process or through improper fairy shrimp re-introduction techniques.
- Any adverse impacts from increased human activity and presence (e.g., off-road vehicle activity, trampling of pools, illegal dumping, etc.).

o A mitigation plan shall be prepared and implemented for significant direct and indirect impacts from proposed development or roads. The following shall be incorporated into the mitigation plan:

- Preserve vernal pool complexes and associated watersheds where this species occurs or has the potential to occur.
- Include within the Preserve all occupied, restored vernal pool habitat and associated watersheds.
- Provide a 100-foot buffer around all preserved vernal pool complexes and associated watersheds.
- Restore or enhance disturbed vernal pool habitat to mitigate for unavoidable direct impacts to potential habitat or for indirect impacts to occupied habitat. Mitigation ratios for potential vernal pool habitat shall be based on accepted standards at the time that Specific Plan development occurs, and shall be established through consultation with, and approval from, the resource agencies.

- Restore or enhance already disturbed habitat prior to impacting potential vernal pool habitat.
- As mitigation for impacts to potential habitat, conduct a study at the Specific Plan level concerning the feasibility of re-introducing this species into restored or enhanced vernal pool habitat. If feasible, use approved methodologies for introduction and monitoring of re-introduced populations.
- Maintain connectivity within vernal pool complexes and between adjacent or nearby vernal pool groups.
- Develop and implement a plan to eliminate harmful runoff from development and roads while still maintaining sufficient water supply for maintaining and where appropriate enhancing occupied, potential, and restored vernal pool habitat.

o A management plan shall be prepared and implemented for these species.

Harbison's Dun Skipper *(Euphyes vestris harbisoni)*

o 100% (or based on approved HCP/MSCP standards) of occupied habitat shall be preserved.

o The Applicant shall assess direct and indirect impacts from proposed development and roads.

o A mitigation plan shall be prepared and implemented for significant impacts. The following measures shall be incorporated into the mitigation plan:

- The Project shall be designed to avoid impacts to occupied habitat.
- Preserve in natural open space all occupied habitat. Preserve in natural open space, high quality potential habitat (including all southern live oak riparian forest), and locations where the host plant, San Diego sedge *(Carex spissa)* occurs.
- Enhance as appropriate, unoccupied southern live oak riparian habitat in Preserve areas through the introduction of San Diego sedge.
- Incorporate a minimum of 75% of preserved habitat for this species Into the Management Preserve.
- Maintain, and enhance as appropriate, the existing water quality and quantity in habitat preserved for this species.

o A management plan for this species shall be developed and implemented.

Hermes Copper *(Lycaena hermes)*

- o 100% (or approved HCP/MSCP standards) of occupied habitat for this species shall be preserved.
  - At the Specific Plan level, the Applicant shall conduct focused surveys for this species in appropriate habitat.
  - The Applicant shall assess direct and indirect impacts from proposed development and roads.
  - A mitigation plan for significant impacts shall be prepared and implemented. The following measures shall be incorporated into the mitigation plan:
    - " The Project is designed to avoid impacts to occupied habitat.
    - " Where appropriate, implement mitigation for this species in conjunction with mitigation for other species.
  - A management plan for this species shall be developed and implemented.

Thorne's Hairstreak *(Mitouri thornei)*

- o 100% (or approved HCP/MSCP standards) of occupied habitat shall be preserved.
  - At the Specific Plan level, the Applicant shall conduct focused surveys for this species in appropriate habitat.
  - The Applicant shall assess direct and indirect impacts from proposed development and roads.
  - A mitigation plan for significant impacts shall be prepared and implemented. The following measures shall be incorporated into the mitigation plan:
    - " The Project is designed to avoid impacts to occupied habitat.
    - " Preserve in natural open space all occupied habitat and potential habitat in Tecate cypress *(Cupressus forbesii)* stands.
  - A Fire Management Plan shall be prepared and implemented to prevent catastrophic wildfire destruction of the larval host, Tecate cypress. The fire control measures should include, as a minimum, the following measures:
    - " Prohibition of recreational off-road vehicle activity in the San Ysidro Mountains Parcel.
    - " Restriction of camp fires to designated areas.

" Banning of gun shooting in the San Ysidro Mountains Parcel.

" Development of a public wildfire education and prevention program.

" Development and implementation of a program for conducting controlled burns.

- A management plan for this species shall be developed and implemented.

Quino Checkerspot *(Euphydryas editha quino)*

o 100% (or approved HCP/MSCP standards) of occupied habitat required for this species shall be preserved.

- At the Specific Plan level, the Applicant shall conduct focused surveys for this species in appropriate habitat.

- The Applicant shall assess direct and indirect impacts from proposed development and roads.

- A mitigation plan for significant impacts shall be prepared and implemented. The following measures shall be incorporated into the mitigation plan:

" The Project is designed to avoid impacts to occupied habitat.

" Preserve in natural open space all occupied habitat.

" Preserve historical habitat in conjunction with mitigation for other species (e.g., *Streptocephalus woottoni*).

" Introduce into vernal pools where appropriate, native *Plantago* species, the larval hosts for Quino checkerspot.

California Red-legged Frog *(Rana aurora draytoni)* and Southwestern Pond Turtle *(Clemmys marmorata pallida)*

o 100% (or approved HCP/MSCP standards) of occupied habitat required for this species shall be preserved.

- At the Specific Plan level (affecting occupied habitat for these species) the Applicant shall conduct focused surveys for this species in appropriate habitat.

- The Applicant shall assess direct and indirect impacts from proposed development and roads.

- A mitigation plan shall be prepared and implemented for significant impacts. The following measures shall be incorporated into the mitigation plan:

" Preserve in natural open space all occupied habitat. Preserve in open space, as feasible, potential aquatic habitat.

" Enhance or restore as appropriate, disturbed wetlands adjacent to occupied habitat and in the Otay River, to mitigate for indirect impacts to occupied habitat and impacts to potential habitat.

" Preserve in open space, buffer zones around occupied, potential, and restored habitats. The minimum width of the buffer zone shall be determined at the Specific Plan level in conjunction with, and upon the approval of, the resource agencies. Retain connectivity between upland habitats, identified as essential at the Specific Plan level for this species, and adjacent occupied, potential, and restored aquatic habitats.

" Preserve occupied and potential upland nesting habitat for Southwestern Pond Turtles, which is adjacent to occupied, potential, or restored aquatic habitat.

- A management plan shall be developed and implemented for these species. Provisions shall be made for controlling introduced predators of these species (e.g., bullfrog and large-mouthed bass).

Forty-nine (49) Other Sensitive Wildlife Species

o Detailed studies shall be required at the Specific Plan level to determine distribution and abundance. Assessment of impacts, preparation and implementation of mitigation for significant impacts shall also be required for those species found to occur on-site.

- Preserve habitat in open space (see p. 3.3-108).
- Incorporate open space into the Management Preserve (see p. 3.3-108).
- Restore/enhance disturbed habitat (see p. 3.3-108).

o See Table 6 (from FPEIR) which follows. It should be noted that the reference to the MSCP/HCP in the minimum preservation also includes other appropriate regional standards. Species discussed previously in this document have been removed from this table.

Regional Raptor Populations

o Key raptor resource areas in proposed open space shall be preserved in accordance with the Otay Ranch Raptor Management Study (Ogden 1992a).

o The restoration/enhancement of nesting and foraging habitat shall be required. Standards for preservation are defined in

Table 3.3.7 of the FPEIR, the pertinent portion of which is attached.

Regional and Local Wildlife Corridors

- o The Project is designed to maintain connectivity of the parcels and adjacent blocks of off-site open space.

- o Specific mitigation for all corridors shall follow detailed recommendations from the Otay Ranch Wildlife Corridor Study (Ogden 1992b). The following general recommendations apply to all regional and important local wildlife corridors.

    - Preserved wildlife corridors shall be retained as natural open space, contain native vegetation, and be used for only passive recreation.

    - All road underpasses and bridges crossing wildlife corridors shall have natural vegetation underneath and be sufficiently wide to encourage wildlife use.

    - Wildlife corridors through development shall be sufficiently wide to encompass the natural rim-to-rim topography and allow undisturbed wildlife movement.

    - Incompatible land uses (e.g., high density residential development and roads) shall not be sited adjacent to wildlife corridors, or within the buffer.

- o The following measures shall be implemented for the Otay Valley Parcel:

    - Impacts from road construction to the four regional corridors in the Otay Valley Parcel shall be mitigated by road design and re-alignment following the Wildlife Corridor Study recommendations.

    - Poggi to Wolf Canyon: The potential California gnatcatcher and cactus wren corridor between Poggi and Wolf Canyons shall be restored to native coastal sage scrub vegetation. A natural open space easement through the northeastern corner of the landfill shall be secured. This easement would need to encompass the off-site portion of the corridor and any buffer zones recommended in the corridor study. The Paseo Ranchero Road crossing of this corridor shall be designed according to the Wildlife Corridor Study recommendations.

    - Wolf Canyon to Salt Creek: Otay Valley Road shall be fitted with a 12-foot drainage culvert at Wolf Canyon to allow bobcats to pass underneath. The Rock Mountain Road crossing of the Wolf Canyon to Salt Creek corridor for gnatcatcher and wren near the northwest end of the quarry shall follow recommendations of the corridor study. Heritage Road, La Media Road, SR-125, and Alta Road

crossings of this corridor along the north slope of the Otay River Valley shall follow the recommendations of the Wildlife Corridor Study.

- Otay Valley: Heritage Road, La Media Road, SR-125, and Alta Road shall be elevated at Otay River Valley crossings of the Otay River Valley in accordance with the Wildlife Corridor Study recommendations. Major ravines and drainages shall also be bridged to allow for movement of wildlife along the Otay River Valley.

- O'Neal Canyon: The new Alta Road alignment crossing of Salt Creek shall be bridged to retain a corridor to the Otay River Valley. This alignment shall be shifted west out of O'Neal Canyon and west of the mouth of Salt Creek. If the existing Alta Road crossing of O'Neal Canyon is widened, it shall be fitted with a large underpass and bridges over major ravines to allow movement into the Otay River Valley.

o The following measures shall be implemented in the Proctor Valley Parcel:

- Corridor R1 (see Figure 3.3.7 in the FPEIR): In the disjunct L-shaped parcel, low density development shall be pulled west out of the ravine and well back on the ridge so that animals may access the ravine, which leads them northwest over the saddle and into the Sweetwater Reservoir. The corridor shall be 1,600 feet wide at the mouth of this ravine, with at least 500 feet of open space along the southwest side of the mouth of this ravine.

- In Proctor Valley, the corridor shall widen from 1,300 feet at the northwest end to 2,200 feet at the southeast end. Development east of Proctor Valley Road shall be pulled back on the south side of the corridor. The K-6 elementary school may be within the buffer if the playing fields are adjacent to the corridor, there is no lighting or activity at night, and appropriate fencing is maintained. Low-density development west of Proctor Valley Road shall be moved north out of the corridor. Re-vegetation and screening from development shall be required in the Proctor Valley portion of the corridor. The Proctor Valley Road crossing shall be bridged (see Wildlife Corridor Study).

- The corridor follows the deep canyon east of Proctor Valley and shall include rim-to-rim topography. It is approximately 1,600 feet wide. Low density development extending into the canyon on the north side of the corridor shall be pulled back onto the ridge tops. Where delineation of rim-to-rim topography is not obvious, there shall be 800 feet of width in open space extending up each side of the ravine.

- Local Corridor 4: To eliminate impacts by Proctor Valley Road to Local Corridor 4, Proctor Valley Road shall be elevated across ravines along its alignment to allow for wildlife movement underneath and into the alternate corridor in the creek bed to the north of Proctor Valley Road.

- Corridor R2: Low density and LMV development along the western site of this corridor shall be pulled back to retain rim-to-rim topography in open space. The corridor is approximately 1,600 feet wide throughout the canyon. Low-density development on a knoll on the east side of the corridor shall be eliminated as it encroaches into the corridor. At the south end of Corridor R2 near Otay Lakes Road, LMV and MH development shall be pulled back to the east and west respectively, to maintain a minimum width of 1,600 feet. At the Otay Lakes Road crossing, the corridor may narrow following Wildlife Corridor Study recommendation. The proposed park at the south end of the corridor shall be designed at the Specific Plan level so as not to impact the corridor. It shall be sited within the buffer zone (moved east or west) and not relocated within the ravine. The two Otay Lake Road crossings of this corridor shall be bridged as recommended in the Otay Ranch Wildlife Corridor Study.

o The following measures shall be implemented in the San Ysidro Mountains Parcel:

- Local Corridor 8: At the north end of Corridor 8 in the San Ysidro Mountains Parcel, development shall be eliminated from the canyon southeast of the San Diego Air Sports Center to retain this major local wildlife corridor.

- Corridor 11: Development along the western portion of Little Cedar Canyon shall be pulled back to avoid constraining wildlife movement in Corridor 11. Expansion of Otay Lakes Road shall require a bridge at the Corridor 11 road crossing. Such bridge shall meet the design recommendations of the Wildlife Corridor Study.

- Corridor 10: Very low-density development along the northern edge of Cedar Canyon in Corridor 10 shall be restricted to the ridge top.

- Regional Corridor 5: At the Specific Plan level, there shall be no new road alignments or development in natural open space and Special Resource Study Areas within Corridor 5.

- Local Corridor 9 should include rim-to-rim topography through development areas. Development should be screened from the view of animals within these corridors.

- Within the San Ysidro Mountains Parcel, development should be pulled back from Dulzura Creek at the Otay Lakes Road crossing and away from the east end of Lower Otay Lakes to allow wildlife movement along Dulzura Creek to Otay Lake via Corridor 5.